

Storm Data and Unusual Weather Phenomena - January 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
WISCONSIN, Southeast				

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA

01/03/09 15:00 CST	0	Winter Weather
01/04/09 09:00 CST	237	0

Light freezing rain spread across south-central and southeast Wisconsin during the overnight hours of January 3rd. Ice accumulations on road and sidewalks ranged from 1/10 to 2/10 of an inch, but there were some isolated 1/4 inch amounts. However, ice accumulations on trees and fences were minimal. Some light snow and sleet, with accumulations of less than an inch, occurred at the end of this winter weather event. This freezing rain event had a large impact on society - in the form of thousands of vehicle accidents, and hundreds of people seeking medical treatment at hospitals. The media reported that vehicles slid off roads, rolled over, or slid backwards down hills. There were several reports of semi-tractor trailers jackknifing. A 7-year-old boy died (indirect) in a 2-vehicle accident near the intersection of STH 151 and CTH S southwest of Beaver Dam in Dodge County. Five other people were injured (indirect). It was reported that the vehicles were driving too fast for the icy road conditions. Two people were injured (indirect) in a 2-vehicle accident northeast of Janesville on STH 26 (Rock Co.). In Green County, the Sheriff Department noted that 6 people were injured (indirect) in various vehicle accidents. In Madison (Dane Co.), 177 people needed medical treatment at 3 hospitals due to falling on icy surfaces. In Fond du Lac County, at least 60 people fell on icy surfaces and required medical treatment. No doubt, many other people elsewhere in South-central and Southeast Wisconsin were injured in falls on ice surfaces. Synoptically, low pressure moved from the Southern Plains to Missouri to Northern Illinois to Lower Michigan.

(WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA

01/09/09 04:00 CST	0	Winter Weather
01/09/09 13:00 CST	0	

Snow fell across south-central and southeast Wisconsin on January 9th during a 9-hour period, with the greatest accumulations south of a Madison to Milwaukee line. A narrow band of 6 to 8 inch accumulations occurred from southern Iowa County through southern Dane County to the Burlington (Racine Co.) and Paddock Lake area (Kenosha Co.). Societal impact was minimal, therefore, this event was documented as a winter weather event rather than a Winter Storm event. Snowfall amounts north of a Madison to Milwaukee line ranged from 2 to 4 inches. Both Oregon (Dane Co.) and Burlington (Racine Co.) gathered 8.5 inches, while 8 inches fell in La Grange (Walworth Co.). Palmyra (Jefferson Co.) came in with 6 inches and 5.7 inches accumulated in Janesville (Rock Co.). The Madison (Dane Co.) airport measured 3.6 inches and the Milwaukee Airport came in with 3 inches. The media reported that dozens of vehicle accidents occurred. Synoptically, low pressure moved east along the Iowa-Missouri border through Central Illinois and then up the Ohio River Valley.

(WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA

01/09/09 21:00 CST	0	Winter Weather
01/10/09 13:00 CST	0	

This was round number two of two days of dry, fluffy, snow falling over roughly the same area in south-central and southeast Wisconsin. However, the axis of the greatest snow accumulations in round two was south of the Jan 9th winter weather event, and stretched from Janesville (Rock Co.) to La Grange (Walworth Co.) to Kenosha (Kenosha Co.). Specific accumulations included 8 inches in La Grange, 7.6 inches in Janesville, 7.2 inches just northwest of the city of Kenosha, 6 inches in Burlington (Racine Co.), an estimated 5 to 6 inches in extreme southeast Green County, 5 inches in Racine (Racine Co.), 3.5 inches at a location 3 miles southeast of Palmyra (Jefferson Co.), and an estimated 3 to 4 inches in southeastern Lafayette County. Since all of this snow fell over a 16-hour period, the impact on society was minimal. Therefore, this event was classified as a Winter Weather event rather than a Winter Storm event. Synoptically, a strong short-wave trough in the upper levels of the atmosphere moved east through the Midwest and concentrated snowfall over south-central and southeast Wisconsin, as well as over northern Illinois.

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA

01/12/09 16:00 CST	0	Winter Weather
01/13/09 06:00 CST	0	

An Alberta-clipper winter weather event affected south-central and southeast Wisconsin with new snow accumulations and gusty northwest winds that led to some blowing and drifting snow. Snow accumulations ranged from roughly 2 inches in the counties of Milwaukee, Racine and Kenosha, on to up to 3 to 4.8 inches along and northwest of a line from Madison (Dane Co.) to Port Washington (Ozaukee Co.). Northwest winds on the backside of the low pressure were on the order of 13 to 22 knots (15 to 25 mph) with gusts to

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26 knots (30 mph). Specific accumulations included 4.8 inches in Mt. Horeb (Dane Co.), 4.7 inches in Ripon (Fond du Lac Co.), 4.5 inches in Portage (Columbia Co.), 4.3 inches north of Oxford (Marquette Co.), and 4 inches in Random Lake (Sheboygan Co.). Dozens of vehicle accidents were noted by the media. The responsible Alberta-Clipper low pressure dropped southeast out of the Northern Plains through northern Illinois and then to Northern Ohio.				

(WI-Z044) ADAMS, (WI-Z047) GREEN LAKE, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK

01/13/09 07:00 CST	0	Cold/Wind Chill
01/13/09 11:00 CST	0	

Bitter cold arctic air poured into South-central and Southeast Wisconsin on January 13th in the wake of an Alberta Clipper low pressure. At sunrise air temperatures ranged from -3 to +5, however, by late morning air temperatures ranged from -2 to +7 across southern Wisconsin. Northwest winds of 13 to 22 knots (15 to 25 mph) with gusts to 30 knots (35 mph) generated wind chill values of -20 to -30. Several public schools delayed the start of classes by 2 hours.

(WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA

01/13/09 23:00 CST	0	Winter Weather
01/14/09 09:00 CST	0	

Another Alberta-Clipper low pressure dropped from the Northern Plains across southern Iowa through central Illinois. New snow accumulations of 1 to 3 inches were noted across South-central and Southeast Wisconsin while north winds gusted to 17 knots (20 mph). Most locations picked up around an inch of snow, but New Glarus (Green Co.) measured 3 inches. The new snow and winds resulted in drifting of the dry snow across west-east orientated roads in exposed areas. During this event, visibilities were reduced to 1 to 2 miles. The media reported dozens of vehicle accidents.

(WI-Z071) RACINE, (WI-Z072) KENOSHA

01/14/09 09:00 CST	0	Lake-Effect Snow
01/14/09 13:00 CST	0	

A couple bands of lake-effect snow developed over southern Lake Michigan in association with a meso-low pressure, and then moved inland to affect the counties of Racine and Kenosha. In the city of Racine (Racine Co.), 8 inches was measured, while 5 inches fell in the city of Kenosha (Kenosha Co.). The axis of the greatest snow accumulations extended from the city of Racine southwest to near Paddock Lake (Kenosha Co.) where roughly 6 inches fell. An estimated 2 to 4 inches accumulated over extreme southeast Milwaukee County. At the Racine Airport, north-northwest winds gusted to 29 knots (33 mph) during the heavy lake-effect snow squalls which lowered visibilities at that location to around 1/4 mile at times.

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA

01/14/09 20:00 CST	0	Cold/Wind Chill
01/15/09 06:00 CST	2	0

Cold arctic air poured into South-central and southeast Wisconsin as a massive arctic high pressure pushed into the Midwest. Air temperatures dropped into the single digits and then below zero as northwest to west winds of 10 to 20 knots (12 to 23 mph) pushed wind chills down into the -20 to -30 range. Maximum air temperatures on January 14th ranged from +5 in Juneau (Dodge Co.) to +12 at several locations in Kenosha County. Minimum air temperatures Thursday morning January 15th ranged from -10 in Sheboygan (Sheboygan Co.) to -24 in Sauk City (Sauk Co.). Two people were treated for frostbit in a Madison hospital on January 14th. Numerous schools closed down on January 15th and 16th, and many civic clubs activities were cancelled.

(WI-Z060) OZAUKEE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE

01/14/09 20:00 CST	0	Cold/Wind Chill
01/16/09 12:00 CST	0	

Bitter cold arctic air poured into Southeast Wisconsin as a massive high pressure pushed southeast into the Midwest. This was some of the coldest air experienced in the past 10 to 15 years. Numerous schools closed down on January 15th and 16th, and many civic clubs activities were cancelled. Maximum air temperatures on January 14th ranged from +6 in Whitewater (Walworth Co.) to +13 in West Allis (Milwaukee Co.). Minimum air temperatures Thursday morning January 15th ranged from -11 at the airports in Watertown (Jefferson Co.) and Waukesha (Waukesha Co.) to -21 in Ft. Atkinson (Jefferson County). Maximum air temperatures on Thursday, January 15th ranged from -6 at NWS Forecast office southeast of Sullivan (Jefferson Co.) to +1 in the locations of Germantown (Washington Co.), West Allis (Milwaukee Co.), and Mt. Mary College (Milwaukee Co.). Minimum air temperatures during the pre-dawn hours of Friday, January 16th ranged from -12 in West Allis (Milwaukee Co.) to -24 in Watertown (Jefferson Co.) and Oconomowoc (Waukesha Co.). The lowest wind chill values during this arctic blast occurred during the pre-dawn hours of Friday, January 16th, and ranged within a couple points either side of -30. However, the wind chill values dropped consistently below -20 during the evening hours of January 14th. During this

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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arctic blast, the winds were generally west to southwest at 4 to 13 knots (5 to 15 mph), but the wind occasionally become calm overnight in some river valleys. No new record low temperatures were established. However, Milwaukee's minimum temperature of -12 on January 16th was the 6th coldest daily low temperature on record since 1995. Milwaukee's maximum temperature of zero on January 15th was the 4th coldest daily maximum on record since 1995.

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA	01/15/09 06:00 CST		0	Extreme Cold/Wind Chill
	01/16/09 12:00 CST	2	0	

Onen of the coldest arctic blasts in 10 to 15 years numbed residents of South-central and Southeast Wisconsin during the period of Thursday, January 15th through the noon hour on January 16th. Minimum air temperatures Thursday morning January 15th ranged from -10 in Sheboygan (Sheboygan Co.) to -24 in Sauk City (Sauk Co.). Maximum air temperatures on Thursday, January 15th ranged from -8 at Monroe (Green Co.) to +1 in the locations of Germantown (Washington Co.), West Allis (Milwaukee Co.), and Mt. Mary College (Milwaukee Co.). Minimum air temperatures during the pre-dawn hours of Friday, January 16th ranged from -11 in Sheboygan to -35 at the Lone Rock Airport (Sauk Co.). The lowest wind chill values during this arctic blast occurred during the pre-dawn hours of Friday, January 16th, and ranged from -35 in West Bend (Washington Co.) to -42.5 in Middleton (Dane Co.). During this arctic blast, the winds were generally west to southwest at 4 to 13 knots (5 to 15 mph), but the wind occasionally become calm overnight in some river valleys. No new record low temperatures were established. owever, Madison's minimum temperature of -19 on January 16th was the 7th coldest daily minimum on record since 1995. Madison's maximum temperature of -2 on January 15th was the 4th coldest daily maximum on record since 1995. Two people were treated for frostbite in a Madison hospital on January 15th. Numerous schools closed down on January 15th and 16th, and many civic clubs activities were cancelled. Synpotically, a massive high pressure dropped southeast from Alaska through central Canada and down into the mid-section of the United States.

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK	01/24/09 06:00 CST		0	Cold/Wind Chill
	01/24/09 10:00 CST		0	

What may be the last cold/wind chill event of the 2008-09 winter season affected South-Central and Southeast Wisconsin on January 24th. Fresh arctic air pushed in on west to northwest winds of 4 ro 13 knots (5 to 15 mph). Minimum air temperature dropped to -9 in Baraboo (Sauk Co.), Mineral Point (Iowa Co.), and Monroe (Green Co.) to +2 at the Racine Airport (Racine Co.). Wind chill values dropped to within a couple points either side of -20. Synoptically, a cold front moved southeast through the Great Lakes Region while a large high pressure dropped southeast through the Northern Plains.

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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WISCONSIN, Southeast

(WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA

02/08/09 23:30 CST	0	Dense Fog
02/09/09 08:00 CST	0	

Light southerly winds ahead of a warm front approaching the western Great Lakes region ahead of low pressure tracking from the Central Plains toward Minnesota brought increasing low-level moisture into Southern Wisconsin during the early morning hours. Portions of Southeast Wisconsin saw visibilities fall to between 1/8 and 1/4 mile between 0100 and 0800CST. Temperatures at or below freezing produced some freezing fog.

(WI-Z052) SHEBOYGAN

02/10/09 05:30 CST	0	Dense Fog
02/10/09 12:00 CST	0	

Warm southeast winds flowing over the relatively cold waters of Lake Michigan produced dense fog over Sheboygan County during the overnight hours. Visibilities were reduced to 1/4 mile.

(WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA

02/21/09 00:00 CST	0	Winter Storm
02/21/09 17:00 CST	0	

Yet another winter storm affected South-central and Southeast Wisconsin with a combination of snow accumulations of 3 to almost 9 inches, and gusty northeast to northwest winds to 26 knots (30 mph). Blowing snow resulted in snow drifts to 1 to 2 feet in depth in open exposed areas, since the snow didn't have a lot of moisture content. Occasionally, visibilities were reduced to 1/4 to 1/2 mile in open areas. The greatest accumulations were generally north of a Madison to Milwaukee line. Specific snow accumulations include: 8.8 inches in West Bend and Allenton, both in Washington County, 8.7 inches in Waukesha (Waukesha Co.), 8.5 inches in Belgium (Ozaukee Co.), 7.8 inches in Elkhart Lake (Sheboygan Co.), 7.8 inches in West Allis (Milwaukee Co.), 7.4 inches at a location 5 SW Downtown Madison (Dane Co.), 7.4 inches in Lake Mills (Jefferson Co.), an estimated 7 to 8 inches in East-central Dodge County and far southeast Fond du Lac County, 7 inches in Blanchardville (Lafayette Co.), and generally 5 to 6.5 inches over the remainder of the counties listed in this Winter Storm event. However, snow amounts were only 3 to 5 inches in Kenosha County. Media reports indicated that dozens of vehicle accidents and slide-offs occurred. Synoptically, an Alberta-clipper low pressure dropped from the Northern Plains to Northern Missouri where it intensified and then moved through Northern Illinois to Lower Michigan.

(WI-Z060) OZAUKEE, (WI-Z066) MILWAUKEE, (WI-Z071) RACINE, (WI-Z072) KENOSHA

02/26/09 16:00 CST	0	Dense Fog
02/26/09 21:00 CST	0	

Relatively warm...moist air flowing over the cold waters of Lake Michigan produced dense fog along the lakeshore counties of Southeast Wisconsin during the late afternoon and evening hours. Visibilities were reduced to between 1/8 mile and 1/4 mile during the evening rush hour.

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA

02/26/09 22:00 CST	0	Winter Weather
02/27/09 03:00 CST	0	

A mix of snow, freezing rain, sleet, and some rain fell across South-central and Southeast Wisconsin during the overnight hours. Once temperatures dropped from the 32 to 35 degree range down to the 30 to 32 range, a glazing of ice up to 1/8 inch developed on untreated roads surfaces. Media reports indicated that hundreds of vehicle accidents and slide-offs occurred. Vehicle crash responders were overwhelmed and could not immediately respond to some of the accidents. Just after daybreak in the Civil Town of Oakland, southeast of Lake Mills in western Jefferson County, a vehicle slid into another vehicle, resulting in 1 fatality and 1 critical injury (both indirectly-related). West of Lake Mills, a hilly portion of Interstate-94 iced up about 2330CST February 26th, completely preventing west-bound vehicles from making it up the grade. Synoptically, a vigorous low pressure tracked out of the Nebraska area through Northern Illinois and then to the Lake Huron area. Prior to the freezing rain and glazing of road surfaces, showers and thunderstorms left rainfall amounts of around an inch along with some pea-size hail. At a location 5 SW Downtown Madison, an observer measured 1.31 inches of rain.

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LAKE MICHIGAN				
LM SHEBOYGAN WI TO WINTHROP HARBOR IL EWD BYD 5NM TO MID LINE OF LAKE COUNTY --- 1.2 NNE SHEBOYGAN [43.77, -87.71]				
	03/24/09 23:42 CST	0		Marine Thunderstorm Wind (MG 55 kt)
	03/24/09 23:42 CST	0		Source: C-MAN Station
A powerful thunderstorm wind gust affected the Sheboygan port area. No damage was reported.				
A line of intense rain showers with isolated thunderstorms moved out over Lake Michigan and quickly fell apart. However, one powerful wind gust was observed in the Sheboygan port area.				
WISCONSIN, Southeast				
(WI-Z066) MILWAUKEE				
	03/02/09 00:00 CST	0		Lake-Effect Snow
	03/02/09 16:00 CST	0		
A narrow but intense band of lake-effect snow showers moved onshore over Central and Southern Milwaukee County at the start of the calendar day of March 2nd. The most intense portion of the snow band extended from downtown Milwaukee through south-central Milwaukee County, and remained nearly stationary overnight and through much of the morning on March 2nd. The band then drifted west and dissipated during the late morning and afternoon. Locations under the stationary band reported 6 to 10 inches of snow, with General Mitchell International Airport measuring 14.4 inches of dry, fluffy snow. Snowfall amounts tapered off rapidly away from the center of the narrow band. Three inches of snow accumulated in the one-hour time period from 0000CST to 0100CST at the airport. Several flights at the airport were delayed. Accumulations at the western border of Milwaukee County were less than an inch. Oak Creek picked up 10 to 13 inches, Cudahy measured 10 inches, the eastern part of Franklin came in with 6 to 8 inches, and Shorewood picked up 6 inches.				
(WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z062) IOWA, (WI-Z064) JEFFERSON, (WI-Z066) MILWAUKEE, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	03/07/09 17:00 CST	0		Dense Fog
	03/08/09 03:00 CST	0		
Saturated low levels from earlier rains along a nearly stationary boundary across northern Illinois and southern Wisconsin combined with cooling temperatures to produce widespread dense fog over most of Southeast Wisconsin and a portion of South Central Wisconsin during the evening of March 7th and lasting into the early morning hours of March 8th. The lowest visibilities fell to between 1/8 mile and 1/4 mile.				
(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z063) DANE				
	03/08/09 12:00 CST	0		Winter Storm
	03/08/09 19:30 CST	0		
A deepening surface low pressure system tracked across northern Illinois into southern lower Michigan. The low produced a band of heavy snow and gusty winds across portions of South-central and East-central Wisconsin. A period of freezing rain deposited 0.10 to 0.20 of an inch of ice before changing over to all snow. Maximum snowfall totals of 6 to 7 inches fell across northwest Fond Du Lac, Green Lake, and Marquette counties. Snow totals in the counties of Sauk, Columbia, northern Dane, Dodge, and Sheboygan were only in the 2 to 5 inch range due to a mixture of rain, sleet, and freezing rain changing to snow. There were several media reports of broken tree branches, felled trees, and some scattered power outages due to the weight of the wet snow and freezing rain along with gusty winds to 30 to 35 knots (40 mph). An isolated gust to 55 knots (64 mph) was measured at the Sheboygan County Airport (KSBM) at 1513CST. In Sheboygan County the Sheriff Department reported at least a dozen vehicle accidents due to slippery streets and driving too fast for road conditions, and there were 19 reports of trees or branches down on power-lines in this county. Near Theresa in northeast Dodge County, a roll-over resulted in one injury (indirectly related).				
(WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z062) IOWA, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z070) WALWORTH, (WI-Z071) RACINE				
	03/10/09 09:00 CST	0		Dense Fog
	03/10/09 18:00 CST	0		
Abundant low level moisture from earlier rains and light winds with a weak pressure gradient as a surface low tracked across the region combined to produce dense fog during the afternoon of March 10th. Visibilities fell to 1/4 mile.				

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
ROCK COUNTY --- 0.2 NW EDGERTON [42.83, -89.07], 3.6 ENE (JVL)ROCK CO ARPT JA [42.64, -88.97]				
	03/24/09 21:00 CST		25K	Thunderstorm Wind (EG 56 kt)
	03/24/09 21:10 CST		0	Source: Law Enforcement

Powerful thunderstorm wind gusts leveled many large trees, and blew down a pole shed that had 30 cows inside.

JEFFERSON COUNTY --- 4.0 SW FT ATKINSON [42.89, -88.91], 1.0 W FT ATKINSON [42.93, -88.87]				
	03/24/09 21:25 CST		2K	Thunderstorm Wind (EG 56 kt)
	03/24/09 21:30 CST		0	Source: Law Enforcement

A 30-foot tall tree was snapped and uprooted in Rock River Park, and several other trees were toppled in the area southwest and west of Ft. Atkinson. In addition, some of the toppled trees and broken branches knocked down a couple power-lines that resulted in the loss of electrical power to 300 customers.

KENOSHA COUNTY --- 2.0 N DOWNTOWN KENOSHA [42.61, -87.83]				
	03/24/09 23:10 CST		0	Thunderstorm Wind (EG 56 kt)
	03/24/09 23:10 CST		0	Source: Law Enforcement

A couple street signs and fencing were damaged and several large trees were uprooted by powerful thunderstorm wind gusts.

A narrow band of intense rain showers with isolated thunderstorms ahead of a cold front moved rapidly from west to east across Southern Wisconsin during the late evening hours of March 24th. Outflow winds from individual cells within the band produced powerful thunderstorm wind gusts that resulted in tree and structural damage. This was the 1st severe weather episode in South-central and Southeast Wisconsin for the 2009 season.

(WI-Z052) SHEBOYGAN, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	03/28/09 16:00 CST		0	Winter Storm
	03/29/09 10:00 CST		0	

Strong low pressure tracked northeast from southeast Missouri to southeast Lower Michigan during the night of March 28th into the morning of March 29th. Maximum snowfall totals of 6 to 8 inches were recorded over Racine, Kenosha, and far southern Milwaukee counties. Specific accumulations included 8.3 inches 2NE of Sturtevant, 7.5 inches in Paddock Lake (Kenosha Co.), 6.5 inches in the northwest part of Franklin (Milwaukee Co.), an estimated 6 inches in the Muskego area (Waukesha Co.), 5 inches in Whitewater (Walworth Co.), 4.5 inches in Germantown (Washington Co.), and 3 to 4 inches in far southern Jefferson County and far northeastern Rock County. Spotters reported thundersnow near the city of Racine around 0500CST on the 29th, with wind gusts in excess of 40 mph near Lake Michigan creating near-blizzard conditions at times. While snow amounts to the north and west were less, a mixture of sleet, rain, freezing rain, and snow created very hazardous driving conditions. Ice accumulations of 0.10 of an inch, and sleet accumulations between 1/2 inch to 1 inch were reported during the course of the storm. The media reported dozens of vehicle accidents due to slippery road surfaces. In Richfield (Washington Co.) a 2-vehicle accident resulted in 3 fatalities and 4 injuries (all indirectly-related). In the City of Milwaukee (Milwaukee Co.) three men died while shoveling the heavy snow (indirectly-related). We Energies reported 13,000 customers lost electricity due to weather related damage in parts of Milwaukee, Racine and Kenosha counties.

(WI-Z051) FOND DU LAC, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN				
	03/28/09 16:00 CST		0	Winter Weather
	03/29/09 10:00 CST		0	

Strong low pressure tracked northeast from southeast Missouri to southeast Lower Michigan during the night of March 28th into the morning of March 29th. Maximum snowfall totals of 4 inches were recorded over Fond Du Lac, Iowa and northern Lafayette counties. Specific accumulations included 4.1 inches 2NE of Darlington (Lafayette Co.), and in Deforest (Dane Co.); 4.0 inches 2SW Fond Du Lac, 1NE Baraboo (Sauk Co.), and Mineral Point (Iowa Co.); 3.5 inches in Beaver Dam (Dodge Co.); 3.0 inches at Monroe (Green Co.); and 2.0 inches in Portage and Wisconsin Dells (Columbia Co.). Along with these snow amounts, a mixture of sleet, rain, freezing rain, and snow created very hazardous driving conditions. Ice accumulations of 0.10 of an inch, and sleet accumulations between 1/2 inch to 1 inch were reported during the course of this winter weather event. The media reported dozens of vehicle accidents due to slippery road surfaces. Near Darlington (Lafayette Co.) a 2-vehicle accident resulted in 1 fatality and 1 injury (both indirectly-related); while another 2-vehicle accident resulted in two fatalities and one injury near the village of Cobb in Iowa County (all indirectly-related). Greater snow amounts in an associated winter storm event occurred at the same time over Southeast Wisconsin.

Storm Data and Unusual Weather Phenomena - April 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
WISCONSIN, Southeast				
(WI-Z052) SHEBOYGAN, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	04/30/09 01:00 CST	0		Dense Fog
	04/30/09 08:00 CST	0		

Light easterly winds from off the cooler waters of Lake Michigan combined with increasing moisture as surface low pressure approached from the southwest to produce dense fog across portions of Southeast Wisconsin. Visibilities fell to 1/4 mile or less along and east of a Sheboygan County to Walworth County line. Several airline flights were delayed at the Milwaukee Airport.

Storm Data and Unusual Weather Phenomena - May 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
LAKE MICHIGAN				
NORTH PT LT TO WIND PT WI COUNTY --- 3.5 SE NORTH POINT LTHOUSE [43.05, -87.88]				
	05/13/09 21:10 CST		0	Marine Thunderstorm Wind (MG 39 kt)
	05/13/09 21:10 CST		0	Source: C-MAN Station
NORTH PT LT TO WIND PT WI COUNTY --- 3.5 SE NORTH POINT LTHOUSE [43.05, -87.88]				
	05/13/09 21:15 CST		0	Marine Thunderstorm Wind (MG 40 kt)
	05/13/09 21:15 CST		0	Source: C-MAN Station
WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 1.2 ENE KENOSHA [42.59, -87.81]				
	05/13/09 21:20 CST		0	Marine Thunderstorm Wind (MG 41 kt)
	05/13/09 21:20 CST		0	Source: C-MAN Station
WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 1.2 ENE KENOSHA [42.59, -87.81]				
	05/13/09 22:50 CST		0	Marine Thunderstorm Wind (MG 34 kt)
	05/13/09 22:50 CST		0	Source: C-MAN Station

A strong cold front moved across the nearshore waters of Lake Michigan, producing a line of thunderstorms. Some of these thunderstorms produced severe wind gusts over the nearshore waters.

WISCONSIN, Southeast

DODGE COUNTY --- 1.3 SSE FARMERSVILLE [43.55, -88.54], 0.2 NNW KNOWLES [43.57, -88.50]				
	05/13/09 20:45 CST		0.17M	Thunderstorm Wind (EG 78 kt)
	05/13/09 20:50 CST		0	Source: Law Enforcement

A microburst generated a 100 yard wide swath of tree and structural damage from just southeast of the Village of Farmersville northeast to Knowles. Wind gusts were estimated at 78 knots (90 mph). Damage included...2 barns down killing 7 cows, 4 sheds and 1 greenhouse destroyed, and 5 homes affected (minor damage). Also, about 150 trees were toppled or damaged. Heavy rainfall between 1.50 inches and 2.60 inches caused ponding of water on roads in the area.

A cold front extending southward from deep low pressure over southern Canada provided a focus for scattered thunderstorms as it moved across southern Wisconsin during the late afternoon and evening hours. While the majority of the thunderstorms remained below severe limits, producing small hail...heavy downpours of rain and wind gusts between 35 and 48 knots (40 and 55 mph), a line of strong thunderstorms produced a downburst of damaging winds in northeast Dodge County.

Storm Data and Unusual Weather Phenomena - June 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
LAKE MICHIGAN				
WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 1.2 ENE KENOSHA [42.59, -87.81]				
	06/08/09 15:20 CST	0		Marine Thunderstorm Wind (MG 47 kt)
	06/08/09 15:20 CST	0		Source: Official NWS Observations
A line of severe thunderstorms developed in the warm sector ahead of an approaching low pressure system. Warm, moist air and MLCAPE values of 1000-1500 J/kg continued to fuel the storms as they moved across southern Wisconsin. These storms produced damaging winds as they moved from Southeast Wisconsin out over the waters of Lake Michigan from near Wind Point south to Winthrop Harbor IL. Hail up to 1/5 inches in diameter was reported inland away from Lake Michigan with these storms, however, no reports of hail over the nearshore waters were received.				
SHEBOYGAN TO PT WASHINGTON WI COUNTY --- 1.4 E SHEBOYGAN [43.75, -87.69]				
	06/19/09 00:00 CST	0		Marine Thunderstorm Wind (MG 38 kt)
	06/19/09 00:00 CST	0		Source: C-MAN Station
WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 1.2 ENE KENOSHA [42.59, -87.81]				
	06/19/09 00:40 CST	0		Marine Thunderstorm Wind (MG 44 kt)
	06/19/09 00:40 CST	0		Source: C-MAN Station
A surge of warm, moist air advection at the nose of a low level jet produced a line of scattered strong thunderstorms which moved over the nearshore waters of Lake Michigan. Thunderstorm wind gusts to around 40 knots were generated.				
WISCONSIN, Southeast				
DANE COUNTY --- 3.4 SSE UTICA [42.92, -89.09]				
	06/08/09 13:21 CST	0		Hail (1.00 in)
	06/08/09 13:21 CST	0		Source: Amateur Radio
ROCK COUNTY --- 5.0 E NEWVILLE [42.83, -88.92], 3.0 NE LIMA CENTER [42.85, -88.79]				
	06/08/09 13:45 CST	0		Thunderstorm Wind (EG 56 kt)
	06/08/09 14:00 CST	0		Source: Trained Spotter
A swath of thunderstorm wind damage raked northeast Rock County. Many large trees were uprooted or damaged. The swath was about 4 miles wide. This event continued into northwest Walworth County and then southeast Jefferson County.				
GREEN COUNTY --- 1.0 S BRODHEAD [42.61, -89.37]				
	06/08/09 13:54 CST	0		Hail (1.00 in)
	06/08/09 13:54 CST	0		Source: Trained Spotter
WALWORTH COUNTY --- 2.0 W WHITEWATER [42.83, -88.77], 3.0 E WHITEWATER [42.83, -88.67]				
	06/08/09 14:00 CST	30K		Thunderstorm Wind (EG 56 kt)
	06/08/09 14:10 CST	0		Source: Law Enforcement
A swath of thundersrtorm wind damaged affected northwest Walworth County. The swath was about 4 miles wide. At least 200 trees were uprooted in the Whitewater area, and two vehicles (\$estimated \$10K in damage) were damaged by tree debris. The tree debris also knocked out a couple feeder power-lines that resulted in 3800 customers losing electrical power. This swath started in northeast Rock County and ended in southeast Jefferson County.				
JEFFERSON COUNTY --- 3.0 ENE WHITEWATER [42.85, -88.68], 2.0 SE PALMYRA [42.86, -88.57]				
	06/08/09 14:10 CST	0		Thunderstorm Wind (EG 56 kt)
	06/08/09 14:20 CST	0		Source: Trained Spotter
This event is a continuation of a swath of thunderstorm wind damage that affected northeast Rock County and northwest Walworth County. Many large trees were damaged or uprooted in southeast Jefferson County. The swath was about 4 miles wide.				
WALWORTH COUNTY --- 1.0 NNE TROY CENTER [42.83, -88.46], LAKE BEULAH [42.82, -88.32]				

Storm Data and Unusual Weather Phenomena - June 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	06/08/09 14:21 CST		10K	Thunderstorm Wind (EG 56 kt)
	06/08/09 14:35 CST		0	Source: Trained Spotter

A swath of thunderstorm wind damage was reported in northeast Walworth County. The swath was about 2 miles wide. Many large trees were uprooted or damaged. TA roof on a home in East Troy was damaged by tree debris.

WAUKESHA COUNTY --- 1.8 WSW MUKWONAGO [42.86, -88.36], 1.5 E MUKWONAGO [42.87, -88.30]

06/08/09 14:38 CST	0	Tornado (EF0, L: 3.15 mi , W: 100 yd)
06/08/09 14:42 CST	0	Source: NWS Storm Survey

A weak, minimal EFO tornado spun up along a line of severe thunderstorms that progressed across southern Wisconsin. The responsible supercell actually developed a mesocyclone when it crossed the Jefferson-Waukesha County line west of the village of Eagle. The tornado started at the west end of Lower Phantom Lake and tracked just north of east through the city of Mukwanago and dissipated near the intersection of the Mukwanago River and the Fox River east of the city. Damage was limited to uprooted trees and broken large limbs. The winds were estimated at 56 to 61 knots (65-70 mph). The average path width was about 30 yards. The compass bearing was about 80 degrees. Start and ending location was 42.86003/-88.36303 and 42.86666/-88.30144. DI#27(TH), DOD2.

RACINE COUNTY --- WATERFORD [42.77, -88.22]

06/08/09 14:45 CST	0	Thunderstorm Wind (EG 50 kt)
06/08/09 14:45 CST	0	Source: Law Enforcement

Several large trees were blown down by thunderstorm winds in Waterford.

WAUKESHA COUNTY --- MUKWONAGO [42.87, -88.33]

06/08/09 14:47 CST	0	Hail (1.50 in)
06/08/09 14:47 CST	0	Source: Law Enforcement

KENOSHA COUNTY --- DOWNTOWN KENOSHA [42.58, -87.83]

06/08/09 15:30 CST	0	Thunderstorm Wind (EG 50 kt)
06/08/09 15:30 CST	0	Source: Law Enforcement

Several large trees were blown down in the downtown area.

A line of severe thunderstorms developed over southwest Wisconsin in the warm sector ahead of an approaching low pressure system. These storms produced damaging winds, large hail up to 1.5 inches in diameter, and a weak EFO tornado that spun up near Mukwonago in Waukesha County. A total of 5800 customers lost electrical power due to tree debris impacting power-lines across southeast Wisconsin. At least 3800 of these customers were in the city of Whitwater (Walworth Co.). Warm, moist air and MLCAPE values of 1000-1500 J/kg continued to fuel the storms as they moved across southern Wisconsin. Surface air temperatures were in the upper 70s with dewpoints in the middle to upper 60s.

DANE COUNTY --- DANE [43.25, -89.50]

06/18/09 22:20 CST	0	Hail (2.75 in)
06/18/09 22:25 CST	0	Source: Law Enforcement

Hail increased from 1.75" at 22:23 to 2.75" at 22:25.

IOWA COUNTY --- 0.4 SSW PINE KNOB [43.06, -90.28], 0.6 SE PINE KNOB [43.06, -90.27]

06/18/09 22:27 CST	0	Tornado (EF0, L: 0.46 mi , W: 50 yd)
06/18/09 22:28 CST	0	Source: NWS Storm Survey

A brief, weak, minimal EFO tornado spun up around 5 miles east-northeast of Highland. A few large trees were uprooted or damaged around the intersection of CTH P and Council Bluffs Road. Average path width was about 25 yards. Maximum wind speeds were estimated at 56 to 61 knots (65-70 mph). The path compass bearing was 100 degrees. The beginning and ending points were 43.06442/-90.28184 and 43.06312/-90.27297. DI#27(TH), DOD2.

IOWA COUNTY --- 2.0 WNW DODGEVILLE [42.98, -90.17]

06/18/09 22:45 CST	0	Hail (1.00 in)
06/18/09 22:45 CST	0	Source: Storm Chaser

IOWA COUNTY --- DODGEVILLE [42.97, -90.13], 2.0 E MINERAL PT [42.85, -90.14]

06/18/09 22:45 CST	50K	Thunderstorm Wind (EG 56 kt)
06/18/09 22:45 CST	0	Source: Law Enforcement

Storm Data and Unusual Weather Phenomena - June 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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Many reports of toppled trees and damaged power-lines were received from within and near Dodgeville to a couple miles east of Mineral Point.

IOWA COUNTY --- 5.0 NW RIDGEWAY [43.05, -90.05]

06/18/09 23:00 CST	0	Hail (1.00 in)
06/18/09 23:00 CST	0	Source: Amateur Radio

IOWA COUNTY --- MINERAL PT [42.85, -90.18]

06/18/09 23:00 CST	0	Hail (1.75 in)
06/18/09 23:00 CST	0	Source: Law Enforcement

IOWA COUNTY --- 5.0 SE DODGEVILLE [42.92, -90.06]

06/18/09 23:02 CST	0	Hail (2.50 in)
06/18/09 23:02 CST	0	Source: Trained Spotter

IOWA COUNTY --- DODGEVILLE [42.97, -90.13]

06/18/09 23:04 CST	0	Hail (1.00 in)
06/18/09 23:04 CST	0	Source: Law Enforcement

IOWA COUNTY --- DODGEVILLE [42.97, -90.13]

06/18/09 23:04 CST	0	Thunderstorm Wind (EG 65 kt)
06/18/09 23:04 CST	0	Source: Law Enforcement

An entire grove of trees was toppled.

DANE COUNTY --- 2.0 NE SUN PRAIRIE [43.20, -89.17], 2.0 NW SUN PRAIRIE [43.20, -89.23], 2.0 W DOWNTOWN MADISON [43.07, -89.46], 2.0 E DOWNTOWN MADISON [43.07, -89.38]

06/18/09 23:05 CST	25K	Flash Flood (due to Heavy Rain)
06/19/09 03:00 CST	0	Source: Trained Spotter

Heavy rainfalls of 1 to 3 inches (estimate based on radar and reports) in the Madison to Sun Prairie area resulted in flash flooding. Many streets and roads were flooded to a depth of 1 to 3 feet. Several gravel shoulder washouts were reported.

DODGE COUNTY --- 2.0 WSW IRON RIDGE [43.39, -88.57]

06/18/09 23:05 CST	0	Thunderstorm Wind (EG 56 kt)
06/18/09 23:05 CST	0	Source: Law Enforcement

Several large trees were blown down from thunderstorm winds. One road was blocked by tree debris.

DANE COUNTY --- MIDDLETON [43.10, -89.50]

06/18/09 23:20 CST	0	Thunderstorm Wind (EG 56 kt)
06/18/09 23:20 CST	0	Source: Law Enforcement

Seveal large trees blown down by thunderstorm winds.

IOWA COUNTY --- HOLLANDALE [42.87, -89.93]

06/18/09 23:23 CST	0	Hail (2.00 in)
06/18/09 23:23 CST	0	Source: Amateur Radio

WAUKESHA COUNTY --- 3.0 SW DOWNTOWN WAUKESHA [42.99, -88.26]

06/18/09 23:35 CST	5K	Thunderstorm Wind (EG 56 kt)
06/18/09 23:35 CST	0	Source: Law Enforcement

Several large trees were toppled and a couple power-lines sustained damage due to tree debris.

ROCK COUNTY --- EVANSVILLE [42.78, -89.30]

06/18/09 23:45 CST	15K	Thunderstorm Wind (EG 56 kt)
06/18/09 23:45 CST	0	Source: Law Enforcement

Seveal large trees were toppled and a couple power-lines down sustained damage due to tree debris. A tree fell on a car.

Storm Data and Unusual Weather Phenomena - June 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
JEFFERSON COUNTY --- 4.0 ENE FT ATKINSON [42.95, -88.78]				
	06/18/09 23:50 CST		10K	Thunderstorm Wind (EG 56 kt)
	06/18/09 23:50 CST		0	Source: Law Enforcement
A few large trees were toppled and power-line were down due to tree debris.				
KENOSHA COUNTY --- 0.2 NW DOWNTOWN KENOSHA [42.58, -87.83]				
	06/18/09 23:58 CST		0	Thunderstorm Wind (EG 56 kt)
	06/18/09 23:58 CST		0	Source: Law Enforcement
A few large trees were toppled.				
RACINE COUNTY --- 4.0 E WIND LAKE [42.83, -88.07]				
	06/19/09 00:03 CST		0	Thunderstorm Wind (EG 52 kt)
	06/19/09 00:03 CST		0	Source: Amateur Radio
A few large trees were toppled.				
RACINE COUNTY --- 3.0 W UNION GROVE [42.68, -88.11]				
	06/19/09 00:05 CST		0	Funnel Cloud
	06/19/09 00:05 CST		0	Source: Trained Spotter
RACINE COUNTY --- 4.0 SW DOWNTOWN RACINE [42.68, -87.86], 3.0 W DOWNTOWN RACINE [42.72, -87.86]				
	06/19/09 00:06 CST		0	Thunderstorm Wind (EG 56 kt)
	06/19/09 00:11 CST		0	Source: Amateur Radio
A few large trees were toppled.				
MILWAUKEE COUNTY --- 1.0 W DOWNTOWN MILWAUKEE [43.03, -87.99], 1.0 W WAUWATOSA [43.05, -87.97], WEST ALLIS [43.00, -87.97], 1.0 SE GREENFIELD [42.94, -87.99]				
	06/19/09 00:10 CST		5K	Flash Flood (due to Heavy Rain)
	06/19/09 03:00 CST		0	Source: Storm Chaser
Numerous reports of flash flooding were received from the West Allis, Wauwatosa, Milwaukee, and Greenfield areas. Several roads were flooded to a depth of 1 to 3 feet, and there was standing water on I-894 in Greenfield. West Allis received 3.68" of rain in 1 hour around the midnight hour. A couple cars sustained water damage.				
WALWORTH COUNTY --- MILLARD [42.73, -88.62]				
	06/19/09 00:10 CST		0	Thunderstorm Wind (EG 56 kt)
	06/19/09 00:10 CST		0	Source: Law Enforcement
A few large trees were blown down by thunderstorm winds.				
WAUKESHA COUNTY --- 3.0 NNW DOWNTOWN WAUKESHA [43.06, -88.24], BROOKFIELD [43.07, -88.15], 4.0 E BROOKFIELD [43.07, -88.07], NEW BERLIN [42.98, -88.12]				
	06/19/09 00:10 CST		0.12M	Flash Flood (due to Heavy Rain)
	06/19/09 03:00 CST		0	Source: Amateur Radio
Numerous reports of flash flooding were received from the Waukesha to Brookfield and New Berlin areas. A couple gravel shoulder washouts were reported, and some minor damage to basement contents occurred. Water depths on roads reached 1 to 3 feet. A water control facility in New Berlin was damaged by flood waters (\$100K).				
RACINE COUNTY --- 4.0 N UNION GROVE [42.74, -88.05]				
	06/19/09 00:20 CST		0	Thunderstorm Wind (EG 59 kt)
	06/19/09 00:20 CST		0	Source: Trained Spotter
Several large trees blown down by thunderstorm winds and tree debris was noted on several streets.				
KENOSHA COUNTY --- 1.8 SW DOWNTOWN KENOSHA [42.56, -87.86]				
	06/19/09 01:03 CST		0	Thunderstorm Wind (EG 56 kt)
	06/19/09 01:03 CST		0	Source: Law Enforcement

Storm Data and Unusual Weather Phenomena - June 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
A few large trees were toppled.				
RACINE COUNTY --- DOWNTOWN RACINE [42.72, -87.80]				
	06/19/09 02:05 CST		25K	Lightning
	06/19/09 02:05 CST		0	Source: Newspaper
Lightning struck a home shortly after 0200 CST. The resultant fire damaged an upstairs bedroom. The homes electrical system was fried by the lightning strike.				
A warm front set up across far southern Wisconsin on the afternoon of June 18th as an upper level disturbance moved eastward into the Upper Midwest. A line of severe thunderstorms formed in an area of very warm, unstable air and moved through south-central and southeast Wisconsin overnight. With surface dewpoints near 70, MLCAPE values near 3000 J/kg, and strong wind shear, the storms produced damaging winds, large hail up to 2.75 inches in diameter, dangerous lightning, and a weak tornado. These thunderstorms also dumped very heavy rain up to 4 inches over a relatively short period of time, causing numerous reports of flash flooding across Dane, Waukesha, and Milwaukee counties. At the height of the storms, about 27,000 households were without electricity in southeastern Wisconsin due to damaged power-lines.				
LAFAYETTE COUNTY --- BENTON [42.57, -90.38]				
	06/19/09 07:55 CST		5K	Thunderstorm Wind (EG 65 kt)
	06/19/09 07:55 CST		0	Source: Public
Several large trees were toppled and a power pole was bent by powerful thunderstorm winds.				
LAFAYETTE COUNTY --- 2.0 W SHULLSBURG [42.57, -90.27]				
	06/19/09 08:28 CST		0	Thunderstorm Wind (EG 56 kt)
	06/19/09 08:28 CST		0	Source: Public
Several large trees were blown down by thunderstorm winds.				
GREEN COUNTY --- 2.0 N BROWNTOWN [42.61, -89.82]				
	06/19/09 08:35 CST		0	Thunderstorm Wind (EG 56 kt)
	06/19/09 08:35 CST		0	Source: Law Enforcement
Seveal large trees blown down by thunderstorm winds.				
GREEN COUNTY --- 6.0 NE MONROE [42.66, -89.55]				
	06/19/09 08:52 CST		0	Thunderstorm Wind (EG 56 kt)
	06/19/09 08:52 CST		0	Source: Law Enforcement
Seveal large trees blown down by thunderstorm winds.				
Another upper-level disturbance produced scattered severe thunderstorms over south central Wisconsin during the morning on June 19th. These storms produced damaging winds in Lafayette and Green Counties.				
KENOSHA COUNTY --- 1.3 WNW KENOSHA AIRPORT [42.60, -87.95], 0.2 N KENOSHA AIRPORT [42.60, -87.93]				
	06/19/09 16:42 CST		0	Tornado (EF0, L: 1.23 mi , W: 50 yd)
	06/19/09 16:44 CST		0	Source: NWS Storm Survey
A weak EFO tornado spun up just west of the intersection of I-94 and CTH N. It moved just south of east and dissipated near the northwest runway of the Kenosha Airport. Damage was limited to uprooted trees and broken tree branches. Estimated maximum wind speeds were 56 to 61 knots (65-70 mph). Average path length was 20 yards. The compass bearing was 97 degrees. Starting and ending location were 42.60496/-87.95393 and 42.60291/-87.92993. DI#27(TH), DOD2.				
KENOSHA COUNTY --- 1.0 N PLEASANT PRAIRIE [42.56, -87.93]				
	06/19/09 16:50 CST		0	Hail (1.00 in)
	06/19/09 16:50 CST		0	Source: Trained Spotter
KENOSHA COUNTY --- 2.0 N DOWNTOWN KENOSHA [42.61, -87.83], 4.0 S DOWNTOWN KENOSHA [42.52, -87.83], WILMOT [42.52, -88.18], 4.0 NW PADDOCK LAKE [42.62, -88.18]				
	06/19/09 17:00 CST		12.29M	Flash Flood (due to Heavy Rain)
	06/19/09 21:00 CST		0.20M	Source: Emergency Manager

Storm Data and Unusual Weather Phenomena - June 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
Heavy rains resulted in flash flooding in the southeast part of Kenosha County. Numerous streets were flooded with water depths of 2 to 4 feet , and several were impassable. Several vehicles were stranded in the flood waters and rescues were performed. Water depths were up to the windows of cars in the city of Kenosha. Interstate 94 at STH 165 was covered by water and southbound lanes were closed. STH 50 was closed from Interstate 94 east to CTH H. CTH C was closed going west from Interstate 94 due to high water levels. Several other roads were closed. Damage was noted to several culverts and road shoulders, and water lift stations/pumps were damaged in some facilities. Compounding the flooding problem was the loss of electrical service which meant sump pumps in homes didn't operate. Basement flooding was a major issue. WSR-88D Doppler radar rainfall estimates on top of a wet ground were on the order of 3 to 6 inches for a 24-hour period ending 2000 CST. Some farm fields were probably flooded, per newspaper articles, but no direct loss estimates were available. Therefore, a nominal \$200K was estimated for the purpose of this documentation.				

The initial Uniform Disaster Situation Report compiled by the Kenosha County Emergency Management indicated that at least 600 homes were affected by flood waters, but had no damage, at least 590 homes had minor flood damage, at least 11 homes had major damage, and at least 1 home was destroyed, for a monetary loss of at least \$11,975,000. At least one business had major flood damage for a monetary loss of at least \$310,000. Total estimated private sector damage was at least \$12,285,000. Public sector damage included about \$265,000 to road systems, \$110,000 damage to water control facilities, \$18,000 damage to public buildings & related equipment, and about \$295,000 to public utility systems, for a total public sector damage estimate of about \$683,000. Additionally, debris clearance cost about \$22,000, protective measures cost about \$57,000, and there was other \$91,000 in miscellaneous costs. These last three values are not considered direct property damage.

MILWAUKEE COUNTY --- 2.0 NW WEST ALLIS [43.02, -88.00], TIMMERMAN ARPT [43.12, -88.03], 2.0 N MILWAUKEE HOAN BRIDGE [43.06, -87.90], 2.0 S MILWAUKEE HOAN BRIDGE [43.00, -87.90]

06/19/09 17:00 CST	13.13M	Flash Flood (due to Heavy Rain)
06/19/09 21:00 CST	0	Source: Law Enforcement

Heavy rains resulted in flash flooding in parts of Milwaukee County, especially in the West Allis to Wauwatosa area east to the Downtown Milwaukee area. Many roads were covered with water to a depth of 1 to 3 feet. Basement flooding was reported. Milwaukee Mitchell Field measured 3.65 inches of rain in the 24-hour period ending 2000 CST. WSR-88D Doppler radar rainfall estimates were in the 3 to 5 inch range over parts of Milwaukee County. The City of Milwaukee sewer system was overwhelmed. High water levels on the Menomonee River just east of Miller Park resulted in part of an earthen berm being washed away. The subsequent flood water moved west to Miller Park and extensively flooded the lower service area, clubhouses, and part of the dugouts and warehouse. The playing field wasn't affected. Milwaukee Brewer executives said damage was in the millions, but they would not specify an amount. Therefore, for the purpose of this StormData documentation, a value of \$5 Million was assigned.

A Uniform Disaster Situation Report generated by the Milwaukee County Emergency Management indicated that at least 1227 homes sustained minor flood damage, and at least 2 homes had major damage, for a monetary loss of about \$7,079,000. Also, at least 12 businesses sustained minor flood damage and 1 had major damage for a business loss estimate of \$215,000. The total estimated private sector damage in this report was \$7,294,000. Additionally, damage in the public sector amounted to about \$40,000 to road systems, about \$25,000 to water control facilities, about \$269,000 to public buildings & related equipment, and about \$5,000 to public utility systems. The total public sector damage estimate is about \$339,000. Other costs in the report included about \$24,000 in debris clearance, about \$21,385 for protective measures, and about \$107,718 in miscellaneous expenses. However, the last three values are not considered direct property damage. Flood damage to Miller Park is not included in the Uniform report.

RACINE COUNTY --- UNION GROVE [42.68, -88.05], YORKVILLE [42.73, -88.03], DOWNTOWN RACINE [42.72, -87.80], 2.0 S ELMWOOD PARK [42.67, -87.83]

06/19/09 17:00 CST	0.35M	Flash Flood (due to Heavy Rain)
06/19/09 21:00 CST	0	Source: Law Enforcement

Heavy rains resulted in flash flooding over the southeast part of Racine County. Damage was inflicted on a Union Grove retention basin in the Industrial Park Annex. There were some reports of gravel shoulder washouts. Many roads had 1 to 3 feet of water covering the low spots. At least 3 vehicles were submerged in water in the Township of Mount Pleasant. In the city of Racine, traffic had to be diverted due to flooded roads. In Downtown Racine, 6.93 inches of rain was measured in a 24-hour period ending at 2000 CST.

The initial Uniform Disaster Situation Report generated by the Racine County Emergency Management Director indicated that 94 homes were minimally affected by flood waters but the owners were unable to provide damage estimates. One home sustained minor flood damage. An estimate of at least \$347,000 was given in the report for private sector damage. Crop damage was noted in the report, but no monetary value was provided. Public sector damage estimates were not available in the report.

KENOSHA COUNTY --- 4.0 S DOWNTOWN KENOSHA [42.52, -87.83]

06/19/09 17:05 CST	5K	Thunderstorm Wind (EG 56 kt)
06/19/09 17:15 CST	0	Source: Trained Spotter

Several large trees were uprooted by thunderstorm winds and tree debris brought down a couple power-lines.

KENOSHA COUNTY --- 2.0 W DOWNTOWN KENOSHA [42.58, -87.87]

06/19/09 17:10 CST	0	Hail (1.00 in)
06/19/09 17:10 CST	0	Source: Trained Spotter

Storm Data and Unusual Weather Phenomena - June 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
WALWORTH COUNTY --- ELKHORN [42.67, -88.55]				
	06/19/09 18:10 CST		0	Thunderstorm Wind (EG 56 kt)
	06/19/09 18:10 CST		0	Source: Law Enforcement
A few large trees were toppled by thunderstorm winds in the area around Elkhorn.				
WAUKESHA COUNTY --- DOWNTOWN WAUKESHA [43.02, -88.22], 2.0 W DOWNTOWN WAUKESHA [43.02, -88.26], 2.0 SW DOWNTOWN WAUKESHA [43.00, -88.25], 2.0 SE DOWNTOWN WAUKESHA [43.00, -88.19]				
	06/19/09 18:45 CST		10K	Flash Flood (due to Heavy Rain)
	06/19/09 21:00 CST		0	Source: Amateur Radio
Numerous roads were completely flooded and impassable on south side of the city of Waukesha. The Fox River was out of its banks and a couple vehicles were floating in downtown Waukesha due to flood waters. Water damage was inflicted on the vehicles. Water depths on roads were 1 to 3 feet.				
WALWORTH COUNTY --- WHITEWATER [42.83, -88.73], LAKE BEULAH [42.82, -88.32], GENOA CITY [42.50, -88.33], 1.0 W SHARON [42.50, -88.75]				
	06/19/09 19:00 CST		10K	Flash Flood (due to Heavy Rain)
	06/19/09 21:00 CST		0	Source: Law Enforcement
Some fast moving waters flowing over county roads in the township of Walworth. Water depths of 1 to 2 feet were reported. A couple gravel shoulder washouts were noted.				
ROCK COUNTY --- BELOIT [42.52, -89.03], 5.0 E BELOIT [42.52, -88.93]				
	06/19/09 19:03 CST		0	Thunderstorm Wind (EG 56 kt)
	06/19/09 19:10 CST		0	Source: Law Enforcement
Seveal large trees were blown down by thunderstorm winds.				
The final in a series of upper level disturbances propagated northeastward across southern Wisconsin during the afternoon and evening of June 19th. This impulse, combined with strong upper level jet dynamics and a very moist, unstable atmosphere, allowed for storms to redevelop across southern Wisconsin. Bulk shear values of 50-60 kts, MLCAP values near 2500 J/kg, and PW values near 1.8" allowed for a series of short thunderstorm lines to move through southern Wisconsin. The result was wind damage, a tornado in Kenosha County, and widespread flash flooding. Due to the heavy rainfall from earlier storms, some locations received 3 to almost 7 inches of rain in less than 24 hours. Flash flooding occurred in Kenosha, Walworth, Waukesha, Milwaukee, and Racine counties.				
(WI-Z057) COLUMBIA, (WI-Z062) IOWA, (WI-Z068) GREEN				
	06/22/09 14:00 CST		0	Heat
	06/22/09 17:00 CST		0	
A ridge of high pressure settled over the Midwest. A very warm air mass with light winds and plenty of sunshine allowed temperatures to warm into the low to mid 90s away from Lake Michigan. Dewpoint temperatures were in the low 70s. Heat index values reached 100 to 101 degrees inland from Lake Michigan by late afternoon.				
(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z067) LAFAYETTE, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	06/23/09 12:00 CST		0	Heat
	06/23/09 17:00 CST		0	
A ridge of high pressure remained in place over the Midwest on the 23rd. Temperatures reached into the mid 90s in many locations by late afternoon. In addition, dew point temperatures in the upper 60s to lower 70s allowed heat indices to rise to 100 to 106 degrees.				
ROCK COUNTY --- 1.8 SE NEWVILLE [42.81, -88.99], 2.6 SE NEWVILLE [42.80, -88.98]				
	06/23/09 19:07 CST		5K	Thunderstorm Wind (EG 65 kt)
	06/23/09 19:09 CST		0	Source: Law Enforcement
Powerful thunderstorm winds toppled several trees and tree debris brought down a couple power-lines.				
ROCK COUNTY --- 2.1 NNW MILTON JCT [42.80, -88.98], 1.8 N MILTON JCT [42.80, -88.97]				
	06/23/09 19:09 CST		8K	Tornado (EF0, L: 0.84 mi , W: 30 yd)
	06/23/09 19:11 CST		0	Source: NWS Storm Survey

Storm Data and Unusual Weather Phenomena - June 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
An isolated thunderstorm cell quickly developed and spun up a weak landspout-type tornado that was spotted by the Janesville airport observer, trained spotters and the public. It began over the southwest part of Clear Lake and moved east-southeast and ended just east of STH 59. A screen porch was ripped off a mobile home trailer and some trees just south and southeast of Clear Lake were uprooted or damaged. The estimated max wind speeds of were 70-75 mph. Starting and ending location of 42.79879/-88.98358 and 42.79540/-88.96750. The compass bearing was 117 degrees. The average path width was about 15 yds. DI#3, DOD2.				

A single isolated cell developed quickly in the Edgerton area of north-central Rock County, moved east-southeast, and produced a weak landspout-type tornado and wind damage northwest of the Milton area.

JEFFERSON COUNTY --- 5.2 SW FT ATKINSON [42.88, -88.92]				
	06/25/09 16:25 CST		0.10K	Thunderstorm Wind (EG 56 kt)
	06/25/09 16:25 CST		0	Source: Public

Thunderstorm wind gusts toppled several large trees at the Koshkonong Mounds CC golf course on the east side of Lake Koshkonong southwest of Ft. Atkinson in Jefferson County. Additionally, a tent was damaged and blew away at the Jellystone Campground on the southeast side of Lake Koshkonong.

JEFFERSON COUNTY --- 3.0 S FT ATKINSON [42.89, -88.85], 5.0 S FT ATKINSON [42.86, -88.85]				
	06/25/09 16:35 CST		0	Thunderstorm Wind (EG 56 kt)
	06/25/09 16:35 CST		0	Source: Public

Thunderstorm wind gusts toppled several large trees.

WALWORTH COUNTY --- WHITEWATER [42.83, -88.73]				
	06/25/09 16:46 CST		0	Thunderstorm Wind (MG 54 kt)
	06/25/09 16:46 CST		0	Source: Mesonet

Mesonet at UW Whitewater measured 62 mph wind gust. Several large trees were toppled in the Whitewater area.

A broken line of showers and thunderstorms developed from low-level convergence and a weak trough axis. MLCAPE values were near 2000-2500 J/kg, temperatures were in the upper 80s and the surface dewpoints were near 70. These storms moved through South-central Wisconsin and produced wind damage in Jefferson and Walworth counties.

COLUMBIA COUNTY --- 3.0 ENE PARDEEVILLE [43.55, -89.22], 3.0 NE PARDEEVILLE [43.56, -89.24]				
	06/27/09 18:48 CST		25K	Thunderstorm Wind (EG 65 kt)
	06/27/09 18:48 CST		0	Source: Law Enforcement

Thunderstorm wind gusts toppled several large trees down near STH 44 and STH 33 in the area northeast of Pardeeville. Roof damage to a home was noted near intersection of Vaughn and Atkinson roads. Nearby, a barn roof was torn off.

COLUMBIA COUNTY --- 4.0 SE CAMBRIA [43.51, -89.04]				
	06/27/09 19:03 CST		5K	Thunderstorm Wind (EG 56 kt)
	06/27/09 19:03 CST		0	Source: Trained Spotter

Thunderstorm wind gusts flattened a corn field. Also, several large trees were blown down.

DODGE COUNTY --- 3.0 S BEAVER DAM [43.43, -88.83]				
	06/27/09 19:23 CST		0	Thunderstorm Wind (EG 56 kt)
	06/27/09 19:23 CST		0	Source: Trained Spotter

Seveal large trees were blown down by thunderstorm winds.

A low pressure system located just north of Minnesota moved eastward over northern Wisconsin. South winds ahead of this low and an advancing strong cold front brought an increase in moisture and instability. Severe thunderstorms developed along the cold front across southern Wisconsin. Storm reports were limited to thunderstorm wind damage in Columbia and Dodge counties.

Storm Data and Unusual Weather Phenomena - July 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
WISCONSIN, Southeast				
(WI-Z063) DANE				
	07/10/09 06:30 CST	1	15K	Strong Wind (MAX 43 kt)
	07/10/09 07:30 CST		0	
<p>A thunderstorm complex moved west to east across far southern Wisconsin and a "wake-low" developed on its northwest side. Strong gusty winds of 35 to 43 knots (40 to 50 mph) were generated in the tight surface pressure gradient. There was no indication that lightning or thunder were observed or heard, therefore, this event was classified as a "strong wind" event.</p>				
Direct Fatalities: M46VE				
DANE COUNTY --- (MSN)TRUAX FLD MADIS [43.13, -89.33], 2.5 S EAST BRISTOL [43.23, -89.15]				
	07/11/09 01:15 CST		0.13M	Hail (1.50 in)
	07/11/09 01:25 CST		0	Source: Official NWS Observations
<p>A severe thunderstorm produced large hail up to 1.5 inches that fell in a 3-mile wide swath that extended for 13 miles from Dane County Regional Airport (KMSN) to 6 miles northeast of Sun Prairie. Locally, the hail duration lasted about 5 minute based on eye-witness accounts. At least 12 cars were damaged with broken windows and dents. One severe weather spotter reported minor damage to his home's siding and door, so it is assumed that several homes were damaged, and probably more than 12 vehicles were damage. The loss estimated takes this assumption into account.</p>				
<p>A cold front pushing through southern Wisconsin triggered thunderstorms along and behind the front during the early morning hours of July 11th. A few of the thunderstorms strengthened to severe levels, producing large hail over portions of South-Central Wisconsin.</p>				
ROCK COUNTY --- 1.4 N (JVL)ROCK CO ARPT JA [42.64, -89.03]				
	07/23/09 11:20 CST		2K	Lightning
	07/23/09 11:20 CST		0	Source: Newspaper
<p>Lightning struck an Alliant Energy electrical substation, blowing out a circuit. About 800 customers went without power for about one hour.</p>				
ROCK COUNTY --- 2.2 N CLINTON [42.60, -88.87]				
	07/23/09 11:45 CST		0	Lightning
	07/23/09 11:45 CST	1	0	Source: Newspaper
<p>A 44-year-old woman was struck by lightning while standing in the doorway of a barn holding the reins of a horse. She was taken to Beloit Memorial Hospital and treated in the emergency department.</p>				
MARQUETTE COUNTY --- 9.0 SSE MONTELLO [43.68, -89.25]				
	07/23/09 12:18 CST		0	Hail (1.00 in)
	07/23/09 12:18 CST		0	Source: Emergency Manager
<p>Hail up to 1 inch in diameter covered the ground white near the intersection of State Highway 22 and Grouse Avenue near Montello. Gusty winds also brought down small tree branches.</p>				
RACINE COUNTY --- 3.8 SW NORTH CAPE [42.74, -88.12], 1.5 N UNION GROVE [42.70, -88.05]				
	07/23/09 13:50 CST		0	Hail (1.00 in)
	07/23/09 13:58 CST		0	Source: SHAVE Project
<p>Hail, estimated to be 1 inch in diameter, fell in a 2-mile wide swath from southwest of North Cape to north of Union Grove.</p>				
WALWORTH COUNTY --- 4.1 E LA GRANGE [42.80, -88.52]				
	07/23/09 14:00 CST		0	Hail (0.75 in)
	07/23/09 14:30 CST		2K	Source: Public
<p>The public reported that hail, estimated to be 3/4 inch in diameter and driven by gusty thunderstorm winds, damaged corn crops in northeast Walworth County.</p>				
KENOSHA COUNTY --- 1.5 E SILVER LAKE [42.55, -88.14], 2.0 S BRISTOL [42.52, -88.05]				
	07/23/09 14:40 CST		0	Hail (1.00 in)
	07/23/09 14:55 CST		0	Source: Public
<p>Hail, estimated to be 1 inch in diameter, fell in a 2-mile wide swath from 1.5 miles east of Silver lake to 2 miles south of Bristol in Kenosha County.</p>				

Storm Data and Unusual Weather Phenomena - July 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
Large-scale atmospheric lift and wind shear associated with a short wave trough combined with an unstable air mass over the region to produce rotating thunderstorms that produced large hail over southern Wisconsin during the afternoon hours of July 23rd.				
LAFAYETTE COUNTY --- 2.0 SW BELMONT [42.71, -90.36], 6.0 SE SHULLSBURG [42.51, -90.15]				
	07/24/09 16:05 CST		0.50M	Hail (2.75 in)
	07/24/09 16:05 CST		6.42M	Source: Law Enforcement
A 5-mile wide hail swath damaged crops (corn, soy beans, wheat, and alfalfa), vehicles (windows and dents), and at least 25 homes (windows, siding, and roofs). This hail swath merged with a another, later, hail swath, with the merger southeast of Shullsburg. Some fields southeast of Shullsburg were totally stripped by the hail stones.				
Newspaper accounts indicated that the two hail swaths resulted in damage to 20,000 acres of corn and 10,000 acres of soybeans in Lafayette County. Using an average of 135 bushels of corn per acre with a price of \$3.45 per bushels yields a corn loss of \$9.315 M. Using an average of 38 bushels of soybeans per acre, and a price of \$9.25 per bushel yields a soybean loss of \$3.515 M. These loss estimates were divided by two and assigned to the two hail swaths equally.				
LAFAYETTE COUNTY --- 4.0 W BELMONT [42.73, -90.41], 5.0 SSW BELMONT [42.66, -90.37]				
	07/24/09 16:05 CST		10K	Thunderstorm Wind (EG 78 kt)
	07/24/09 16:10 CST		0	Source: Law Enforcement
Powerful thunderstorm winds toppled dozens of trees and damaged a shed.				
LAFAYETTE COUNTY --- 2.9 SSW SEYMOUR CORNERS [42.63, -90.27], 2.2 NNE SHULLSBURG [42.60, -90.22]				
	07/24/09 16:12 CST		0.10M	Tornado (EF0, L: 3.36 mi , W: 75 yd)
	07/24/09 16:17 CST		10K	Source: NWS Storm Survey
A weak tornado spun up a little north of the intersection of CTH Q and Prairie Rd. (about 4 miles northwest of Shullsburg). It proceeded to move on a 145 degree bearing southeast to just southeast of the intersection of CTH U and Jackson Rd. a couple miles north-northeast of Shullsburg. Major damage was inflicted on a barn and storage pole shed, several trees were uprooted or snapped, and some minor damage was inflicted on a corn field. The specific starting and ending GPS coordinates were 42.63011/-90.26829 and 42.59963/-90.21671, and the damage intensity was based on DI 1 (SBO), DOD 8. The average width was about 30 yards. The wind was estimated to be about 105 mph.				
LAFAYETTE COUNTY --- 1.0 W BENTON [42.57, -90.40], 6.0 SE SHULLSBURG [42.51, -90.15]				
	07/24/09 17:18 CST		0.50M	Hail (2.75 in)
	07/24/09 17:35 CST		6.42M	Source: Law Enforcement
A 5-mile wide hail swath damaged crops (corn, soy beans, wheat, and alfalfa), vehicles (dents and broken windows), and at least 25 homes (roofs, windows, and siding). This swath merged with another hail swath from an earlier storm that traveled from Northwest Lafayette County to southeast of Shullsburg. Some farm fields were stripped to nothing by the hail stones.				
Newspaper accounts indicated that the two hail swaths resulted in damage to 20,000 acres of corn and 10,000 acres of soybeans in Lafayette County. Using an average of 135 bushels of corn per acre with a price of \$3.45 per bushels yields a corn loss of \$9.315 M. Using an average of 38 bushels of soybeans per acre, and a price of \$9.25 per bushel yields a soybean loss of \$3.515 M. These loss estimates were divided by two and assigned to the two hail swaths equally.				
LAFAYETTE COUNTY --- 2.0 SW BENTON [42.55, -90.41], 6.0 SE SHULLSBURG [42.51, -90.15]				
	07/24/09 17:18 CST		0	Thunderstorm Wind (EG 78 kt)
	07/24/09 17:35 CST		0	Source: Law Enforcement
Powerful thunderstorm winds toppled dozens of trees.				
LAFAYETTE COUNTY --- 1.8 NNE NEW DIGGING [42.55, -90.31], 3.4 S SHULLSBURG [42.52, -90.24]				
	07/24/09 17:32 CST		50K	Tornado (EF0, L: 4.16 mi , W: 50 yd)
	07/24/09 17:40 CST		10K	Source: NWS Storm Survey
A weak tornado spun up about 1/3 mile south-southwest of the intersection of STH 11 and CTH I, or roughly a couple northeast of New Diggings. It proceeded to move on a 122 degree bearing southeast to about 1/3 mile east of the intersection of CTH O and Blackhawk Rd., about 3.5 miles southeast of Shullsburg. A small pole shed was destroyed and small portions of a side-wall and roof of a home were peeled off. Otherwise several trees were uprooted or snapped. The specific starting and ending GPS coordinates were 42.55270/-90.31193 and 42.52115/-90.24236, and the damage intensity was based on DI 1 (SBO), DOD 6. The average width was about 25 yards. The wind was estimated to be about 90 mph.				
LAFAYETTE COUNTY --- 4.0 NW NEW DIGGING [42.57, -90.39], 3.0 SE SHULLSBURG [42.54, -90.19], 3.0 S SHULLSBURG [42.53, -90.23], 2.0 WNW NEW DIGGING [42.54, -90.37]				

Storm Data and Unusual Weather Phenomena - July 2009

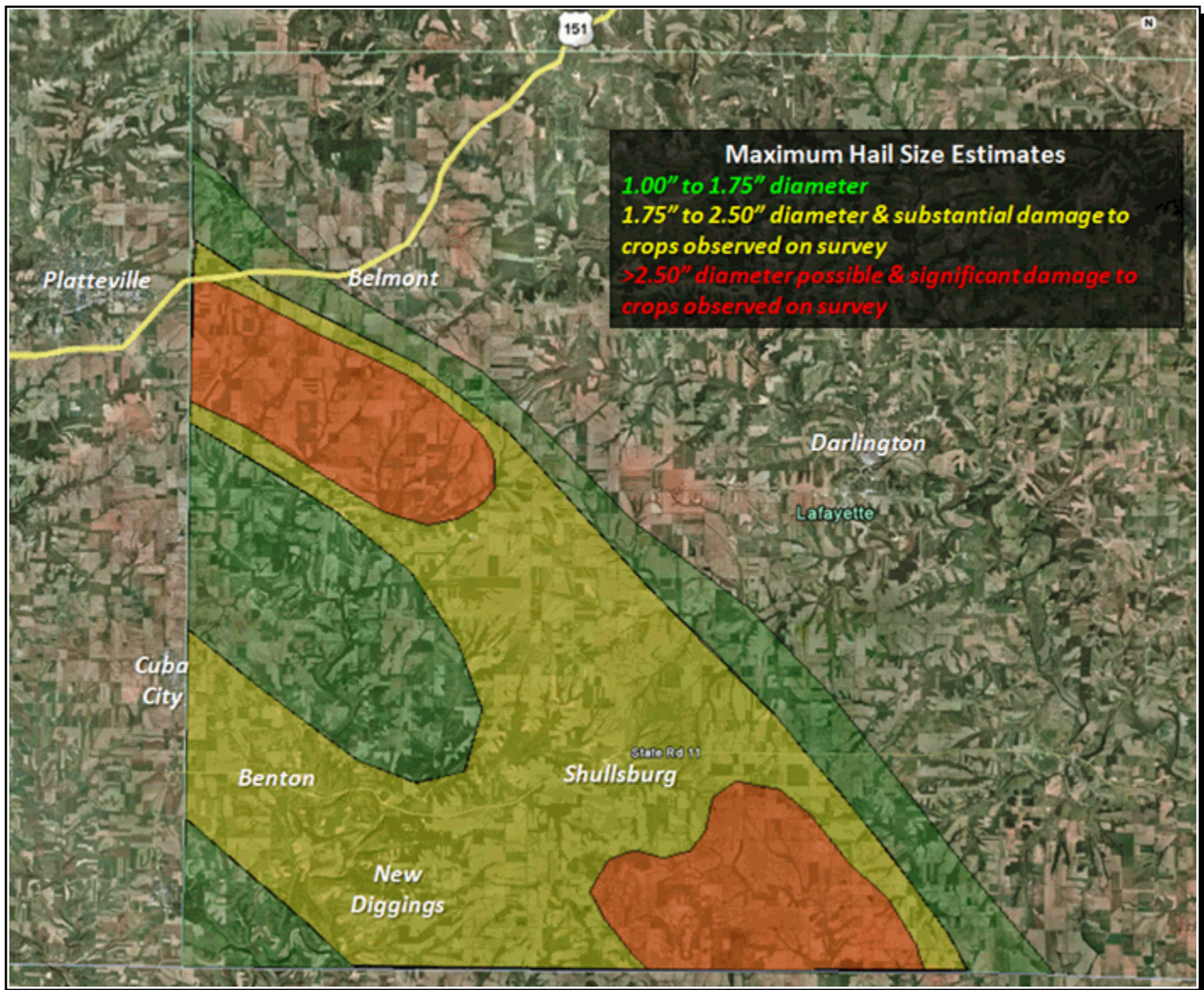
Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	07/24/09 18:00 CST		30K	Flash Flood (due to Heavy Rain)
	07/24/09 20:30 CST		0	Source: Law Enforcement

Repeated heavy rains from a couple thunderstorms resulted in flash flooding in the area from New Diggings to southeast of Shullsburg. All rivers and streams in this area rose above flood stage, and many roads had depths of 2 to 3 feet of fast-flowing water. Several of the gravel shoulders were washed out, and lots of vegetative debris was left on some roads.

(WI-Z069) ROCK

07/24/09 18:45 CST	0	High Wind (MAX 50 kt)
07/24/09 19:15 CST	0	

A cold front crossed Wisconsin during the late afternoon and evening hours of July 24th. Large scale lift and deep layer wind shear associated with upper level low pressure moving into the region led to the development of supercell thunderstorms in southwest Wisconsin. Severe thunderstorm wind gusts, large hail, and two tornadoes were reported in Lafayette County with the supercell storms.



This is an image showing the two hail swaths that severely damaged crops in Lafayette County. Note how the individual hail swaths merge southeast of Shullsburg where crops were shredded to nothing.

MARQUETTE COUNTY --- WESTFIELD [43.88, -89.48], MONTELO [43.80, -89.32]

Storm Data and Unusual Weather Phenomena - July 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	07/27/09 16:06 CST		30K	Thunderstorm Wind (EG 56 kt)
	07/27/09 16:40 CST		0	Source: Law Enforcement

Severe thunderstorms produced damaging winds estimated up to 65 mph that caused extensive tree damage in a 4 mile wide swath from Westfield to Montello. Trees fell on two homes at Buffalo Lake causing roof damage. Several power lines were damaged by tree debris and there were scattered power outages in the Montello area. Most likely this wind damage was associated with the forward flank downdraft of the supercell thunderstorm that generated a F1 tornado in Marquette County a few minutes later.

MARQUETTE COUNTY --- 2.1 WNW GLENOAK [43.76, -89.37], 5.4 SE GLENOAK [43.70, -89.25]

07/27/09 16:48 CST	10K	Tornado (EF1, L: 7.41 mi , W: 150 yd)
07/27/09 17:12 CST	10K	Source: NWS Storm Survey

A tornado spun up about 2 miles west-northwest of Glen Oak (about 3 miles southwest of Montello), roughly mid-way between Williams Lake and Metcalf Lake. It proceeded to move southeast on a 150 degree bearing to where Grand Ave. crosses into Green Lake County. This weak tornado eventually dissipated about 2 miles northwest of Dalton in southwest Green Lake County. Mainly tree damage was noted along the track in Marquette County. However, one small pole shed lost some roof shingles, and minor roof damage was inflicted upon two mobile trailer homes along Grand Ave. Minor damage to corn crops was noted as well. The starting ending GPS coordinates in Marquette County were 43.76112/-89.36820 and 43.71007, with a damage indicator of DI 27 (TH), DOD 3. The wind speed was estimated at 95 mph. The average path width was about 75 yards.

GREEN LAKE COUNTY --- 3.5 NNW DALTON [43.70, -89.23]

07/27/09 17:10 CST	0	Hail (1.50 in)
07/27/09 17:10 CST	5K	Source: Emergency Manager

An emergency management official reported hail up to 1.50 inches in diameter covered the ground on Grand Ave. on a farm about about 3 miles northwest of the Village of Dalton. Hail stones still measured 1 inch in diameter 18 hours later at this location which was shaded by trees and a corn crop. Newspaper reports indicated that some corn fields were shredded by the hail, therefore an estimated loss estimate of \$5000 was entered with this event.

GREEN LAKE COUNTY --- 4.2 NNW DALTON [43.70, -89.25], 2.0 NNW DALTON [43.68, -89.22]

07/27/09 17:12 CST	0	Tornado (EF0, L: 2.15 mi , W: 100 yd)
07/27/09 17:16 CST	2K	Source: NWS Storm Survey

This tornado segment was a continuation of a EF1 tornado what spun up about 3 miles southwest of Montello in Marquette County. It moved southeast and crossed into Green Lake County where Grand Ave. enters the county. It dissipated about 2 miles north-northwest of the Village of Dalton. Damage was limited mainly to trees (uprooted or branches snapped), but there was some minor damage to a corn field.

GREEN LAKE COUNTY --- DALTON [43.65, -89.20]

07/27/09 17:22 CST	0	Thunderstorm Wind (EG 65 kt)
07/27/09 17:22 CST	0	Source: Law Enforcement

Police officials reported tree damage in the Village of Dalton due to damaging thunderstorm wind gusts.

IOWA COUNTY --- 4.0 S AVOCA [43.12, -90.52]

07/27/09 17:25 CST	0	Funnel Cloud
07/27/09 17:25 CST	0	Source: Trained Spotter

COLUMBIA COUNTY --- CAMBRIA [43.55, -89.10]

07/27/09 17:44 CST	0	Hail (0.88 in)
07/27/09 17:44 CST	0	Source: Trained Spotter

A trained weather spotter reported hail estimated at 0.88 inch in diameter in the Village of Cambria.

IOWA COUNTY --- 5.0 SSW AVOCA [43.11, -90.56]

07/27/09 17:45 CST	0	Thunderstorm Wind (EG 50 kt)
07/27/09 17:45 CST	0	Source: NWS Storm Survey

A NWS storm survey team found a few uprooted trees and other minor tree damage produced by damaging thunderstorm wind gusts.

COLUMBIA COUNTY --- 1.0 N CAMBRIA [43.56, -89.10], CAMBRIA [43.55, -89.10]

07/27/09 17:55 CST	0	Hail (1.00 in)
07/27/09 17:55 CST	0	Source: Law Enforcement

Police officials estimated hail up to 1 inch in diameter fell in a 1/2 mile wide swath from one mile north of Cambria near State Highway 33 to the Village of Cambria.

Storm Data and Unusual Weather Phenomena - July 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
IOWA COUNTY --- LINDEN [42.92, -90.27]				
	07/27/09 18:05 CST		0	Thunderstorm Wind (EG 50 kt)
	07/27/09 18:05 CST		0	Source: Emergency Manager
Emergency management officials reported large trees uprooted by severe thunderstorm wind gusts in the Village of Linden.				
IOWA COUNTY --- 4.0 W AVOCA [43.18, -90.60], AVOCA [43.18, -90.52], 5.0 E HIGHLAND [43.05, -90.28], 3.0 NNW HIGHLAND [43.09, -90.40]				
	07/27/09 18:30 CST		75K	Flash Flood (due to Heavy Rain)
	07/27/09 21:00 CST		0	Source: Emergency Manager
Heavy rains from severe thunderstorms produced flash flooding that washed out the shoulders of several roads and driveways, causing \$75,000 of damage. The AWOS unit at the Mineral Point Airport recorded 1.21 inches of rain between 1830 and 1900 CST.				
LAFAYETTE COUNTY --- 3.6 NNW DARLINGTON [42.73, -90.15], DARLINGTON [42.68, -90.12]				
	07/27/09 18:40 CST		0	Thunderstorm Wind (EG 65 kt)
	07/27/09 18:50 CST		15K	Source: Emergency Manager
Emergency management officials reported tree and crop damage due to severe thunderstorm wind gusts in a 100-yard wide swath.				
LAFAYETTE COUNTY --- 2.0 NE BELMONT [42.75, -90.30], 6.0 ENE BELMONT [42.76, -90.22], 6.0 ESE BELMONT [42.70, -90.22], 2.0 SSE BELMONT [42.70, -90.31]				
	07/27/09 19:00 CST		30K	Flash Flood (due to Heavy Rain)
	07/27/09 22:00 CST		0	Source: Emergency Manager
Heavy rains from severe thunderstorms produced flash flooding that washed out the gravel shoulders of roads in and near Belmont in Lafayette County. Damage due to the flash flooding totaled \$30,000. Rainfall estimates from National Weather Service radar totaled 2 to 3 inches during this time.				
LAFAYETTE COUNTY --- 2.5 NE GRATIOT [42.61, -89.99], 2.5 NE GRATIOT [42.61, -89.99]				
	07/27/09 19:10 CST		0	Tornado (EF0, L: 0.09 mi , W: 25 yd)
	07/27/09 19:11 CST		0	Source: NWS Storm Survey
A NWS storm survey team found evidence of a brief tornado about 2 miles northeast of the Village of Gratiot on a farm just southwest of the intersection of STH 78 and West Chruch Rd. It moved east-southeast on a 95 degree bearing and dissipated on STH 78. Damage was limited mainly to trees (uprooted or branches snapped). The beginning/ending GPS coordinates were 41.60841/-89.99102 and 42.60773/-89.98941 with a damage indicator of DI 27 (TH), DOD 3. The winds were estimated at about 80 mph, and the average path width about 15 yards.				
Deep layer shear with a short wave trough interacted with instability ahead of a surface trough trailing from a surface low in central Wisconsin. The instability and shear produced supercell thunderstorms in southern Wisconsin along and ahead of the surface trough. The severe thunderstorms produced damaging winds, large hail and tornadoes. Heavy rains accompanying the severe thunderstorms produced flash flooding in Lafayette County.				

Storm Data and Unusual Weather Phenomena - August 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
LAKE MICHIGAN				
NORTH PT LT TO WIND PT WI COUNTY --- 3.5 SE NORTH POINT LTHOUSE [43.05, -87.88]				
	08/08/09 09:15 CST		0	Marine Thunderstorm Wind (MG 38 kt)
	08/08/09 09:15 CST		0	Source: C-MAN Station
A weakening complex of thunderstorms moved over the nearshore waters of Lake Michigan during the mid-morning hours on Saturday, August 8th. The thunderstorms developed earlier in the morning from a surge of warm, moist air into central Wisconsin along with with a developing warm front.				
WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 1.2 ENE KENOSHA [42.59, -87.81]				
	08/09/09 15:08 CST		0	Marine Thunderstorm Wind (MG 43 kt)
	08/09/09 15:22 CST		0	Source: C-MAN Station
Strong thunderstorm moved over the nearshore waters of Kenosha producing wind gusts in excess of 34 knots for a 10-15 minute period.				
NORTH PT LT TO WIND PT WI COUNTY --- 3.5 SE NORTH POINT LTHOUSE [43.05, -87.88]				
	08/09/09 15:15 CST		0	Marine Thunderstorm Wind (MG 38 kt)
	08/09/09 15:21 CST		0	Source: C-MAN Station
Strong thunderstorm produced several minutes of strong wind gusts in excess of 34 knots over the nearshore waters of Milwaukee. Strongest gust to 38 knots occurred at 2020 CST.				
NORTH PT LT TO WIND PT WI COUNTY --- 3.5 SE NORTH POINT LTHOUSE [43.05, -87.88]				
	08/09/09 16:24 CST		0.50K	Marine Thunderstorm Wind (MG 40 kt)
	08/09/09 16:45 CST		0	Source: C-MAN Station
Strong thunderstorms moved over the nearshore waters of Milwaukee producing 20 minutes of gusts in excess of 34 knots. Strongest gust to 40 knots occurred at 1625 CST. The Racine County Sheriff Water Patrol picked up two people who were knocked off their Jet Ski by a large wave as the storm passed over Lake Michigan. Additionally, they towed in a boater whose sailboat suffered extensive damage to its jib due to the wind gusts about 1.5 nautical miles east of Wind Point.				
WIND PT LT WI TO WINTHROP HBR IL COUNTY --- 1.2 ENE KENOSHA [42.59, -87.81]				
	08/09/09 16:50 CST		0	Marine Thunderstorm Wind (MG 34 kt)
	08/09/09 16:50 CST		0	Source: C-MAN Station
Strong thunderstorms moved over the nearshore waters of Kenosha producing a wind gust of 34 knots.				
Several waves of thunderstorms moved across portions of the nearshore waters of Lake Michigan during the afternoon and early evening of August 9th. These thunderstorms were caused by an approaching cold front across western Wisconsin into Iowa.				
WISCONSIN, Southeast				
MILWAUKEE COUNTY --- STATE FAIR PARK [43.02, -88.01]				
	08/08/09 08:10 CST		0	Thunderstorm Wind (EG 39 kt)
	08/08/09 08:10 CST	1	0	Source: Newspaper
Wind gusts to around an estimated 39 knots (45 mph) affected the Wisconsin State Fair Park grounds in West Allis. One gust blew over scaffolding that holds up a banner over a ticket booth welcoming people to the fair. The toppled scaffolding injured a women who was treated at a hospital. Milwaukee Mitchell Field had a measured wind gust of 38 knots (43 mph).				
A cluster of sub-severe thunderstorms moved through the Milwaukee area during the mid-morning hours and produced sub-severe wind gusts. The thunderstorms developed in response to a surge of warm, moist air into central Wisconsin along with with a developing warm front.				
LAFAYETTE COUNTY --- 2.0 NE NEW DIGGING [42.55, -90.30], 3.0 SE SHULLSBURG [42.54, -90.19], 3.0 S SHULLSBURG [42.53, -90.23], 2.0 SE NEW DIGGING [42.51, -90.30]				
	08/09/09 13:00 CST		20K	Flash Flood (due to Heavy Rain)
	08/09/09 15:30 CST		50K	Source: Fire Department/Rescue

Storm Data and Unusual Weather Phenomena - August 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
The Shullsburg Fire Department and trained spotters reported fast-flowing water covered roads up to 1.5 feet deep. Also, gravel shoulders were washed out on a couple roads from the heavy rain in the area south and southwest of Shullsburg. There were also reports of small stream flooding as well as flooding of farm fields that damaged some crops.				

GREEN COUNTY --- 1.0 NW MONROE [42.61, -89.64], 1.0 NE MONROE [42.61, -89.62], 1.0 SE MONROE [42.59, -89.62], 1.0 SW MONROE [42.59, -89.64]				
	08/09/09 13:15 CST		10K	Flash Flood (due to Heavy Rain)
	08/09/09 15:30 CST		0	Source: NWS Employee

A National Weather Service employee reported significant street flooding in the city of Monroe with water depths of 2 to 4 feet. Some water damage to basement contents was noted.

ROCK COUNTY --- EVANSVILLE [42.78, -89.30]				
	08/09/09 13:45 CST		0	Thunderstorm Wind (EG 65 kt)
	08/09/09 13:45 CST		0	Source: Law Enforcement

Damaging thunderstorm winds gusts blew trees down over roads in the city of Evansville.

ROCK COUNTY --- 2.0 NW DOWNTOWN JANESVILLE [42.70, -89.05], 2.0 NE DOWNTOWN JANESVILLE [42.70, -88.99], 2.0 SE DOWNTOWN JANESVILLE [42.66, -88.99], 2.0 SW DOWNTOWN JANESVILLE [42.66, -89.05]				
	08/09/09 14:00 CST		30K	Flash Flood (due to Heavy Rain)
	08/09/09 16:00 CST		0	Source: Emergency Manager

Heavy rain caused significant street flooding and basement flooding in the city of Janesville. Fast-flowing water depths of 1 to 3 feet were noted on some roads and water damage to basement contents was noted.

ROCK COUNTY --- MILTON [42.77, -88.95], 4.0 NNW JOHNSTOWN CENTER [42.75, -88.86]				
	08/09/09 14:05 CST		0	Thunderstorm Wind (EG 65 kt)
	08/09/09 14:15 CST		0	Source: Law Enforcement

Damaging thunderstorm wind gusts blew trees down over area roadways between Milton and Johnstown Center.

IOWA COUNTY --- HIGHLAND [43.05, -90.38]				
	08/09/09 14:13 CST		0	Thunderstorm Wind (EG 65 kt)
	08/09/09 14:13 CST		0	Source: Law Enforcement

Law enforcement reported a number of trees blown down by strong thunderstorm wind gusts in and around the village of Highland.

WALWORTH COUNTY --- LAKE GENEVA [42.60, -88.43]				
	08/09/09 14:30 CST		15K	Thunderstorm Wind (EG 65 kt)
	08/09/09 14:30 CST		0	Source: Public

Numerous public reports were made of trees blown down and power lines down in the city of Lake Geneva.

WALWORTH COUNTY --- 2.0 E EAST TROY [42.78, -88.36], HONEY CREEK [42.75, -88.32]				
	08/09/09 14:32 CST		0	Thunderstorm Wind (EG 57 kt)
	08/09/09 14:41 CST		0	Source: Trained Spotter

Tree damage from near Beulah Station (east of city of East Troy) to Honey Creek was noted by a trained spotter. Based on the size of the limbs and trees blown down they estimated winds in excess of 52 knots (60 mph).

LAFAYETTE COUNTY --- CALAMINE [42.73, -90.17]				
	08/09/09 14:40 CST		0	Thunderstorm Wind (EG 65 kt)
	08/09/09 14:40 CST		0	Source: Law Enforcement

Law enforcement reported trees blown down and blocking roads around Calamine in the civil township of Willow Springs, north of the city of Darlington.

RACINE COUNTY --- 2.0 W WATERFORD [42.77, -88.26], DOWNTOWN RACINE [42.72, -87.80]				
	08/09/09 14:45 CST		0.20M	Thunderstorm Wind (EG 75 kt)
	08/09/09 15:10 CST		15K	Source: Law Enforcement

Storm Data and Unusual Weather Phenomena - August 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
Numerous trees and power lines were blown down in a 10-mile damage swath from just west of Waterford to the city of Racine. The FAA Terminal Doppler radar located in north-central Racine County about 5 miles east of the village of Wind Lake showed 85 knot winds at 250 feet above ground level. In Waterford a large tree fell on and damaged a business building. On the north side of Racine two power-poles came down. Several homes in the swath lost varying amounts of roof shingles. There were several reports of tree debris damaging home siding or portions of a roof. Piers and docks were lifted and twisted and damaged on Wind Lake. About 3.5 miles southwest of the City of Racine a camper was lifted by the wind gusts and slammed into a car. A large section of a corn field near Caledonia was flattened by the winds.				

RACINE COUNTY --- BURLINGTON [42.67, -88.27]

08/09/09 14:50 CST	15K	Thunderstorm Wind (EG 61 kt)
08/09/09 14:50 CST	0	Source: Law Enforcement

Powerful thunderstorm winds toppled many large trees in the city of Burlington. One tree had a vary large branch snap off and fall onto a car, curshing it in the process. Tree debris brought down several power-lines.

RACINE COUNTY --- WATERFORD [42.77, -88.22]

08/09/09 14:50 CST	20K	Lightning
08/09/09 14:50 CST	0	Source: Law Enforcement

Lightning struck a business building and damaged all inside electronic equipment.

WAUKESHA COUNTY --- 2.0 SE MUSKEGO [42.88, -88.10]

08/09/09 14:50 CST	10K	Thunderstorm Wind (EG 61 kt)
08/09/09 14:50 CST	0	Source: Broadcast Media

Powerful thunderstorm wind gusts toppled large trees and generated tree debris that brought down some power lines.

IOWA COUNTY --- 5.0 W BLANCHARDVILLE [42.82, -89.97], 0.3 E BLANCHARDVILLE [42.82, -89.86]

08/09/09 14:55 CST	50K	Thunderstorm Wind (EG 65 kt)
08/09/09 15:07 CST	0	Source: Law Enforcement

A swath of thunderstorm wind damage occurred over southeast Iowa County. This swath extended into northeastern Lafayette County and east/southeast into the counties of Dane and Green. Overall the swath was about 15 miles wide. Numerous large trees were uprooted or large branches broken. Tree debris brought down some power-lines. Some roof shingles were blown off the roofs of a couple homes.

LAFAYETTE COUNTY --- 3.5 NE YELLOWSTONE LAKE STATE PARK [42.81, -89.92], 7.0 N ARGYLE [42.80, -89.87]

08/09/09 14:55 CST	50K	Thunderstorm Wind (EG 65 kt)
08/09/09 15:07 CST	0	Source: Law Enforcement

Law enforcement reported numerous trees and power lines down in a 3-mile wide swath over northeastern Lafayette County. The damage swath extended north into Iowa County and east-northeast into the counties of Green and Dane. Roof damage was also reported on several homes. Outside of the city of Blanchardville, a barn was blown down.

GREEN COUNTY --- 5.0 SW MONROE [42.55, -89.70], BROADHEAD [42.62, -89.37]

08/09/09 15:05 CST	15K	Thunderstorm Wind (EG 65 kt)
08/09/09 15:30 CST	0	Source: Law Enforcement

Police reported numerous trees and power lines blown down in a 10-mile wide swath. This was a separate thunderstorm cluster from the one that caused the damage near New Glarus.

KENOSHA COUNTY --- 3.0 W DOWNTOWN KENOSHA [42.58, -87.89], 0.5 NE DOWNTOWN KENOSHA [42.59, -87.82]

08/09/09 15:05 CST	30K	Thunderstorm Wind (EG 65 kt)
08/09/09 15:20 CST	0	Source: Emergency Manager

Thunderstorm winds left a 3-mile wide swath of damage through the City of Kenosha. Numerous trees were uprooted and tree debris knocked down several power-lines. Construction arricades and signs were blown around, and one stop sign was pushed over.

MILWAUKEE COUNTY --- OAK CREEK [42.87, -87.87]

08/09/09 15:05 CST	15K	Thunderstorm Wind (EG 60 kt)
08/09/09 15:05 CST	0	Source: Law Enforcement

Numerous trees and power lines were blown down by thunderstorm wind gusts that were estimated at 61 knots (70 mph). This was from the same line of thunderstorms that moved through northern Racine County.

Storm Data and Unusual Weather Phenomena - August 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
DANE COUNTY --- 3.0 S DALEYVILLE [42.88, -89.82]				
	08/09/09 15:07 CST		10K	Thunderstorm Wind (EG 65 kt)
	08/09/09 15:10 CST		0	Source: Emergency Manager
Emergency Management reported large trees and power lines down in extreme southwestern Dane County, south of Daleyville, along Drammen Valley Rd. This damage was an extension of a damage swath that extended west into Iowa County and south-southwest into northwestern Green County and northeastern Lafayette County.				
GREEN COUNTY --- 4.0 W POSTVILLE [42.80, -89.83], 5.0 W NEW GLARUS [42.82, -89.73]				
	08/09/09 15:07 CST		0	Thunderstorm Wind (EG 65 kt)
	08/09/09 15:13 CST		0	Source: Law Enforcement
Damage to trees and power lines was reported in a 6 mile wide swath from the Iowa County border to 5 miles west of New Glarus. This was a continuation of the line of thunderstorms that produced damage in southeast Iowa County. The length of the entire damage swath totaled about 10 miles.				
DANE COUNTY --- DANE [43.25, -89.50]				
	08/09/09 15:30 CST		0	Thunderstorm Wind (EG 56 kt)
	08/09/09 15:30 CST		0	Source: Trained Spotter
Large trees uprooted and large limbs were knocked out of trees by powerful gusts with heavy rains.				
ROCK COUNTY --- ORFORDVILLE [42.63, -89.25]				
	08/09/09 15:30 CST		10K	Thunderstorm Wind (EG 65 kt)
	08/09/09 15:30 CST		0	Source: Trained Spotter
A trained spotter reported toppled large trees and and power lines down in the village of Orfordville due to thunderstorm winds.				
ROCK COUNTY --- MILTON [42.77, -88.95], JANESVILLE AIRPORT [42.62, -89.04]				
	08/09/09 15:45 CST		0.15M	Thunderstorm Wind (MG 68 kt)
	08/09/09 15:55 CST		0	Source: Law Enforcement
Police reported numerous trees and power lines down between Milton and Janesville. Roof damage was reported in Janesville from the thunderstorm wind gusts, and several homes were damaged by tree debris. One home had some windows blown out. Barn damage was noted in the countryside around Janesville. A 68 knot (78 mph) wind gust was recorded at the Janesville Airport (KJVL).				
WALWORTH COUNTY --- 2.0 SE DELAVAN [42.61, -88.60], LAKE GENEVA [42.60, -88.43]				
	08/09/09 16:01 CST		25K	Thunderstorm Wind (MG 64 kt)
	08/09/09 16:04 CST		0	Source: Amateur Radio
Numerous trees and power lines were blown down by thunderstorm wind gusts. The gusts were measured to 74 mph, with sustained winds of 59 mph, on weather equipment owned by a ham radio operator near Delavan. A television meteorologist estimated wind gusts in Lake Geneva of 52 knots.				
WAUKESHA COUNTY --- EAGLE [42.88, -88.47]				
	08/09/09 16:04 CST		0	Thunderstorm Wind (EG 56 kt)
	08/09/09 16:04 CST		0	Source: Law Enforcement
Police reported trees down in the village of Eagle with estimated wind gusts of 56 knots (65 mph).				
WAUKESHA COUNTY --- 2.0 SE DOWNTOWN WAUKESHA [43.00, -88.19]				
	08/09/09 16:14 CST		0	Thunderstorm Wind (EG 52 kt)
	08/09/09 16:14 CST		0	Source: Trained Spotter
Trees were reported to be blown down by thunderstorm wind gusts on the southeast side of the city of Waukesha by a trained spotter.				
MILWAUKEE COUNTY --- WAUWATOSA [43.05, -87.95]				
	08/09/09 16:55 CST		0	Thunderstorm Wind (EG 56 kt)
	08/09/09 16:55 CST		0	Source: Law Enforcement
Large trees were either uprooted or split by powerful thunderstorm wind gusts.				
WAUKESHA COUNTY --- NEW BERLIN [42.98, -88.12]				

Storm Data and Unusual Weather Phenomena - August 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	08/09/09 23:30 CST		50K	Lightning
	08/09/09 23:30 CST		0	Source: Law Enforcement

Lightning struck a home and started a fire that resulted in a fair amount of damage.

Three rounds of thunderstorms produced wind damage and flash flooding during the afternoon, evening, and overnight hours of August 9th. The thunderstorms developed as a cold front trailing from low pressure over northeast Wisconsin moved into a hot, humid and unstable air mass in place over southern Wisconsin. Temperatures warmed to 85 and 90 degrees, with dew-points in the 70s. Strong unidirectional vertical wind shear produced bowing line segments that caused damaging wind gusts. The thunderstorms produced heavy rainfall as precipitable water values reached 1.8 to 2 inches. All together, in just southeast Wisconsin, at least 28,000 customers lost electrical power. It was reported that 140 power-lines came down due to tree debris, and at least a dozen or two utility poles snapped.

WASHINGTON COUNTY --- RICHFIELD [43.25, -88.20]

08/25/09 17:23 CST	30K	Lightning
08/25/09 17:23 CST	0	Source: Newspaper

Lightning struck a home's chimney and started a fire in the attic and roof area.

Scattered thunderstorms along and ahead of a cold front passing through the Wisconsin area resulted in at least one lightning strike with damage.

Storm Data and Unusual Weather Phenomena - September 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
WISCONSIN, Southeast				
(WI-Z051) FOND DU LAC, (WI-Z058) DODGE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	09/04/09 01:00 CST	0		Dense Fog
	09/04/09 06:30 CST	0		
The combination of high pressure over the Great Lakes Region, clear skies, light winds, and a moist layer of air near the ground allowed for the formation of dense fog overnight. Visibilities were reduced to 1/8 to 1/4 mile. Some airplain flights were delayed. Newspapers noted a few vehicle accidents. One occurred in Dodge County at the intersection of STH 60 and CTH DJ/J, about 3 miles east-northeast of Clyman. In this accident, a vehicle didn't stop at the intersection during the dense fog and struck the side of a semitrailer, resulting in the death of the vehicle's driver, a 47-year-old man (indirect death). Law enforcement officials indicated that the dense fog was probably a factor (but did not directly kill or impact the driver).				
(WI-Z052) SHEBOYGAN, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	09/10/09 23:00 CST	0		Dense Fog
	09/11/09 08:00 CST	0		
The combination of high pressure over the Great Lakes Region, light winds, clear skies, and a moist layer of air near the ground allowed for the development of dense fog overnight. Newspaper articles indicated that there were a few vehicle accidents, and there were some delays in aircraft departures at some airports. Visibilities were reduced to 1/8 to 1/4 mile.				
(WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	09/12/09 02:00 CST	0		Dense Fog
	09/12/09 07:00 CST	0		
The combination of high pressure over the Great Lakes Region, light winds, clear skies, and a moist layer of air near the ground allowed for the development of dense fog overnight. Newspaper articles indicated that there were a few vehicle accidents, and there were some delays in aircraft departures at some airports. Visibilities were reduced to 1/8 to 1/4 mile.				
(WI-Z056) SAUK, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z065) WAUKESHA, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	09/12/09 20:00 CST	0		Dense Fog
	09/13/09 07:00 CST	0		
The combination of high pressure over the Great Lakes Region, light winds, clear skies, and a moist layer of air that moved west from Lake Michigan allowed for the development of dense fog overnight over the southeast corner of Wisconsin and the area from around Madison west-northwest to the Wisconsin River Valley. Visibilities were reduced to 1/8 to 1/4 mile. In between the two highlighted areas, visibilities dropped to only 1/2 to 2 miles, or only briefly dropped to 1/4 mile. Newspaper articles indicated that there were a few vehicle accidents, and there were some delays in aircraft departures at some airports.				
WAUKESHA COUNTY --- 2.0 ESE DELAFIELD [43.06, -88.36]				
	09/27/09 20:02 CST	0		Thunderstorm Wind (EG 56 kt)
	09/27/09 20:02 CST	0		Source: NWS Employee
Powerful thunderstorm wind gusts toppled a few large trees and sheared off a couple pine trees.				
WAUKESHA COUNTY --- 4.0 N DOWNTOWN WAUKESHA [43.08, -88.22]				
	09/27/09 20:09 CST	0		Hail (1.00 in)
	09/27/09 20:09 CST	0		Source: Amateur Radio
Isolated severe storms with large hail and/or winds affected parts of Waukesha County in southeast Wisconsin. These severe storms were associated with the 2nd of two lines of storms generated by a strong cold front moving west across southern Wisconsin. Many of the other storms in both lines produced sub-severe wind gusts of 39 to 43 knots (45 to 50 mph) and pea-size hail. The ground was covered white with pea-size hail in Middleton, Dane County.				
(WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z062) IOWA, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	09/27/09 21:00 CST	55K		Strong Wind (MAX 43 kt)
	09/28/09 18:00 CST	0		

Storm Data and Unusual Weather Phenomena - September 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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Widespread, gradient, strong, northwest winds in the wake of a cold front affected south-central and southeast Wisconsin for about a 21-hour period. The associated deep low pressure moved east across Ontario, Canada. Maximum gusts were in the 39 to 43 knot range (45 to 50 mph) in the Fond du Lac and Sheboygan area south to the Illinois border and in Sauk and Iowa counties. Elsewhere in south-central and southeast Wisconsin maximum wind gusts were in the 35 to 44 mph range while sustained winds were below 26 knots (30 mph). At least eight ASOS or AWOS reporting sites in this strong wind event had sustained wind speeds of 26 to 32 knots (30 to 37 mph) for one hour or more. Severe weather spotter reports and newspaper accounts indicated that scattered power-outages occurred in most of the affected counties due to broken tree branches falling on power-lines. Additionally, some large trees in Fond du Lac County were pushed over. However, a good estimation of damage losses was not possible with this event, therefore a nominal \$5000 loss estimate (power-lines) was assigned to each county in this strong wind event. One concentrated area of power-outages stretched from the City of Waukesha and Delafield area on up into southern Washington County. Tree debris knocked a telephone line onto Interstate-94 just south of Delafield near CTH C at about 2020 CST September 27th. This resulted in the closure of the freeway for about 90 minutes. Along the Lake Michigan shoreline from Sheboygan south to the Illinois border, wind gusts of 31 to 36 knots were reported (36 to 45 mph). However, a Marine Strong Wind event was not logged in this issue of Storm Data for September, 2009, since there were no injuries, fatalities, or damage associated with these gusts.

Storm Data and Unusual Weather Phenomena - October 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
WISCONSIN, Southeast				
(WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA				
	10/06/09 15:00 CST		95K	Strong Wind (MAX 49 kt)
	10/06/09 23:00 CST		0	

Strong west-southwest winds with sustained speeds of 26 to 30 knots (30 to 35 mph) and gusts to 39 to 49 knots (45 to 57 mph) raked south-central and southeast Wisconsin during the late afternoon and evening hours of October 6th. The highest sustained wind speed was 32 knots (37 mph) at the Waukesha Airport (Waukesha Co.) at 2000 CST, and the highest wind gust was 49 knots (57 mph) at a school mesonet site in Grafton (Ozaukee Co.) at 2200 CST. There were a number of reports of broken tree limbs impacting power-lines based on newspaper accounts. Scattered power-outages occurred. A wind-toppled tree in the city of Sheboygan fell onto a parked SUV and damaged its windows and rear quarter panels. Damage was estimated at \$5,000. In addition, a nominal \$5,000 of power-line damage was assigned to each of the counties listed in the headerstrip of this strong wind event. Synoptically, low pressure deepened while it moved northeast through central Wisconsin to northern Lower Michigan. The strong west-southwest winds were post-cold-frontal.

Over the nearshore water areas within 5 nautical miles of the shoreline, between Sheboygan and the Illinois state line, frequent gusts to 34 to 45 knots (39 to 52 mph) were measured by observation platforms. However, no damage was reported (but minor damage was possible). Therefore, a Marine Strong Wind event was not entered into Storm Data.

Storm Data and Unusual Weather Phenomena - December 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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WISCONSIN, Southeast

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z060) OZAUCREE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA

12/08/09 14:00 CST	0	Winter Storm
12/09/09 15:00 CST	0	

This winter storm was the first, widespread storm to affect south-central and Southeast Wisconsin during the 2009-10 winter season. Low pressure strengthened as it moved northeast from the Oklahoma Panhandle across Missouri and western Illinois on Tuesday December 8th, then across northern Illinois and southern Lake Michigan to northern Lower Michigan on Wednesday December 9th. This is a favorable track for heavy snow for southern Wisconsin. Observers recorded widespread 12-inch snow totals, with local 16 to 20 inch amounts. The maximum storm total snowfall reported was 20.2 inches near Mc Farland in Dane County (CoCoRaHS). Snowfall amounts were reduced to between 2 and 6 inches along the Lake Michigan shoreline as a combination of warm air drawn northward ahead of the low and warmer air over the lake turned the precipitation over to rain for a time. Additionally, rapid deepening of the low (a 15-mb fall in less than 12 hours) generated sustained winds of 17 to 26 knots (20 to 30 mph) and occasional gusts of 30 to 37 knots (35 to 43 mph) out of the northeast. This resulted in occasional near-whiteout conditions in open areas due to blowing and drifting snow. The somewhat moist snow and the winds combined to knock down trees and power-lines. At the height of the storm, 32,000 customers in the Madison area and 50,000 customers in the metropolitan Milwaukee area were without electrical power.

Maximum snow amounts in each county include an estimated 16" in northwest Marquette County, 13.8" in Berlin (Green Lake Co.), 13" in Ashford (Fond du Lac Co.), 13" in Elkhart Lake (Sheboygan Co.), 16.6" in Reedsburg (Sauk Co.), 16.5" near Doylestown (Columbia Co.), an estimated 15 inches in far western Dodge County, 16" in West Bend (Washington Co.), an estimated 12" in far northwestern Ozaukee County, an estimated 14" in far southeastern Iowa County, 20.5" near McFarland (Dane Co.), 14" in Waterloo (Jefferson Co.), an estimated 10.5" in far southwestern Waukesha County, an estimated 6.5" in far southeastern Milwaukee County, 14" in northern Lafayette County, an estimated 18" in northeastern Green County and northwestern Rock Counties, an estimated 10.5" in far north-central Walworth County, an estimated 9" in far northwestern Racine County, and 5" in far western Kenosha County.

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z072) KENOSHA

12/23/09 14:00 CST	0	Winter Weather
12/24/09 07:00 CST	0	

The area from Marquette County east to Sheboygan experienced snow accumulations ranging from 1.5 inches near Lake Michigan to 3 inches in Green Lake County. Near the end of this event, a glazing of freezing rain occurred with ice accumulations of less than 1/10 of an inch. This combination resulted in Interstate 43 in Sheboygan County being closed for 3 hours during the morning of December 24th due to vehicle accidents.

Just south of this winter weather event, winter storm conditions were experienced. A band of moderate, to at times heavy, snow extended from near Milwaukee, to just north of Madison to the Wisconsin Dells area, producing 4 to 6 inches of accumulation before changing over to sleet and freezing rain overnight. Counties along the Illinois border saw snow quickly turn over to freezing rain Wednesday afternoon that resulted in an ice storm. Ice accumulations of 1/4 to 1/2 inch coated trees and power lines, causing them to break. Synoptically, warm air advection with a short wave aloft followed by a surface low pressure lifting northward from the southern Plains brought a mix of snow, sleet and freezing rain to Southern Wisconsin the afternoon of Wednesday, December 23rd into the morning of Thursday, December 24th.

(WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH

12/23/09 16:00 CST	0	Ice Storm
12/24/09 04:00 CST	0	

Counties along the Illinois border saw snow quickly turn over to freezing rain during the December 23rd afternoon hours which resulted in a low-end ice storm. Ice accumulations of 1/4 to 1/2 inch coated trees and power lines causing them to break. Many roads became very slippery, and dozens of vehicle accidents were reported. North of this ice storm area, winter storm conditions were experienced. A band of moderate, to at times heavy, snow extended from near Milwaukee to just north of Madison to the Wisconsin Dells area, producing 2 to 6 inches of snow before changing over to sleet and freezing rain overnight. Synoptically, warm air advection with a short wave aloft followed by a surface low pressure lifting northward from the southern Plains brought a mix of snow...sleet and freezing rain to southern Wisconsin the afternoon of Wednesday, December 23rd into the morning of Thursday, December 24th.

(WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUCREE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z071) RACINE

12/23/09 17:00 CST	0	Winter Storm
12/24/09 06:00 CST	0	

Storm Data and Unusual Weather Phenomena - December 2009

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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Winter Storm conditions were experienced in the Baraboo to Madison to Milwaukee corridor from the evening hours of Dec 23rd into the early morning hours of Dec 24th. This storm had a major impact on Holiday shoppers and travelers due to slippery roads and poor visibilities. Generally, a band of moderate, to at times heavy snow, extended from near Milwaukee to just north of Madison to the Wisconsin Dells area, producing 2 to around 6 inches of accumulation before changing over to sleet and freezing rain overnight. Ice accumulations were on the order of 1/10 to 2/10 of an inch, but there was an isolated 1/4 inch ice accumulation in south-central Dodge County. Small tree branches broke under the weight of the snow and freezing drizzle, but no power outages were noted. The maximum snow accumulations for each county included 6.3" south of the city of Waukesha, almost 6 inches in far northwestern Sauk County, 5.5" near Port Washington (Ozaukee Co.), 4.4" in Big Bend (Waukesha Co.), 4.2" in Downtown Milwaukee, 4.1" just southeast of Portage (Columbia Co.), 4" in Hartford (Washington Co.), 3.8" in Lake Mills (Jefferson Co.), 3.5" in the southwest part of the city of Madison, 3" in southeast Dodge County, and 2" in east-central Iowa County. Synoptically, warm air advection with a short wave aloft followed by a surface low pressure lifting northward from the southern Plains brought a mix of snow, sleet and freezing rain to southern Wisconsin the afternoon of Wednesday, December 23rd into the morning of Thursday, December 24th. Toward the Illinois border, mostly freezing rain fell that resulted in a low-end ice storm.